# Flight to Freedom
# 1967 - 1992

**A history of the first 25 years of the**
**Western Blind Rehabilitation Center**
**United States Department of Veterans Affairs**
**Medical Center**
**Palo Alto, California**

**Edited by:**
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and
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## Preface

Joseph J. Hennessey, Director
Western Blind Rehabilitation Center

Members of the senior Western Blind Rehabilitation Center staff accepted assignments to write this history of the Western Blind Rehabilitation Center to celebrate it's 25th anniversary. This was a rare opportunity to summarize the traditions followed and the unique contributions made here. At this anniversary, the WBRC has served over 3500 blinded veterans. It is one of five comprehensive blind rehabilitation centers in the Blind Rehabilitation Services, Department of Veterans Affairs. The Service also has three Blind Rehabilitation Clinics and over 160 Visual Impairment Services Teams.

This history includes 14 chapters. There are appendices for internship programs, chronologies, and publications. The "Flight to Freedom" logo used in this book and by the WBRC is a drawing by Claire Apple. It is based on the sculpture by Michael Naranjo that is displayed in the WBRC's lobby. Mr. Naranjo is a noted sculpture, combat blinded Viet Nam veteran, and former student of the WBRC. The WBRC's motto "Together Creating Independence" was adopted by the WBRC staff based upon the efforts of Pat McDonald. The history also includes photographs collected by Nancy Darling, one of the first Orientation and Mobility staff members. Gene Apple, a former chief of the Center and now a research specialist, and Greg Goodrich, a research psychologist, are the editors.

A great strength of the WBRC has been its outstanding personnel. The WBRC has also received enormous support from the Chiefs of Blind Rehabilitation Service and the Palo Alto Medical Center. The Center was founded under the Blind Rehabilitation Service leadership of Russell C. Williams. and continued to receive support from George "Buck" Gillespie when he replaced Russ. Don Garner has been Chief of Blind Rehabilitation Service since 1979, providing over a decade of guidance and support. Mark Graeber, M.D. was the first Chief of Staff, at the Menlo Park Division, to oversee and support the WBRC. He has contributed the following Foreward to this history. When the WBRC moved to the Palo Alto Division in 1978 Franklin Ebaugh, M.D. ablely served as our Chief of Staff until his untimely death in 1990. Since then we have benefited from the guidance of Richard Mazze, M.D. Mr. James C. DeNiro has skillfully provided more than a decade of guidance to the Medical Center and the WBRC since his appointment as Medical Center Director on February 10, 1980.

The Western Blind Rehabilitation Center has traditions much older than itself, and has experienced some remarkable changes. The foreword by Russell C. Williams and the first chapter on the "Hines Tradition" furnish a sense of the tradition from the first Center Chief. The foreword by Dr. Mark Graeber and Gene Apple furnish an account of the early days of the WBRC from the point of views of the Chief of Staff and the first Chief of the WBRC. The history includes one chapter for each major Organizational change, arranged in approximate chronological order, according to the date of its formal establishment. Each chapter begins with a very brief description of the organizational change, including the date of official establishment and a note about the leadership at that time. Then the traditions, dates, trends, actors, and events leading up to the official establishment of the change are given. The organizational change is described with details about subsequent events, trends, persons, dates, benefits and consequences of the change. In summary, an estimate of the future impact of the organizational change is given.

## FOREWORD: A New and Exciting Treatment Tradition

Mark M. Graeber, M.D.
Chief of Staff Menlo Park Division
and
L. Eugene Apple, Ph.D.
Blind Rehabilitation Research

This 25 year history of the Western blind Rehabilitation Center describes some of the programs and people who have made it unique. The integration of the Western blind Rehabilitation Center into the Menlo Park Division of the VA Medical Center, Palo Alto California began during the early days of the Vietnam War. The new Center brought with it a new and exciting treatment tradition from the Central Blind Rehabilitation Section, at VA Hospital Hines, Illinois. The magnitude of the new concept which was introduced cannot be overemphasized. From the common perception of blind people as totally disabled and doomed to sedentary and fearful lives, a different set of expectations emerged from the Center staff. The team that came to Menlo Park brought a concept of teaching blind people to attack life aggressively. It first made for some anxiety on the part of administrative staff when patients were introduced to table saws and unescorted trips to San Francisco. Everyone was testing the limits of these new ideas and it was exciting.

A set of concerns for administrative leaders was the attempt to coexist a blind program with blind patients on a VA campus that had been a totally psychiatric hospital and still had a majority of psychiatric patients in the census. Would the blind patient be at risk? Initially everyone on the psychiatric side of the house was afraid it would be a problem. As it turned out it wasn't. People breathed more freely.

The Center became known for its skill in dealing with the special rehabilitation problems faced by veterans with low vision. A program to teach the offspring and spouses of newly blinded veterans coping skills, with a live-in program, was developed. Soon the center was reaching out into the community and academia, resulting in frequent visitors and a heightened sense of excitement. For example, the center started a news letter that was sent widely throughout the VA. To provide for future growth, the Center established clinical training graduate affiliations in Orientation and Mobility, Rehabilitation Teaching, and Manual Skills.

The Center soon began serving as a clinical evaluation site for high-tech adaptive devices for the blind: electronic travel aids and reading machines. One of the staff invented a Braille ruler. Modifications to the white cane were developed, and the Center contributed to the commercialization of some of these devices.

Few programs at this Medical Center have been required to adjust as many times, because of earthquakes, as the WBRC. The first building it occupied was condemned, and then the second. Both building changes were the aftermath of changes in building codes which followed major California earthquakes. The staff made the necessary adjustments and the quality of the program has never wavered.

## FOREWORD: The Early Years

Russell C. Williams
Former Chief, Blind Rehabilitation Services
VA Central Office, and Former Chief,
Central Blind Rehabilitation Center

In discussing blind rehabilitation in the Veterans Administration it is necessary to look back on the programs in the Armed Forces in World War II. When casualties grew in number, the medical departments of the Army and Navy named three hospitals in the United States to act as centers to which to bring those so involved for top flight ophthalmic care. It was soon seen that morale required that basic rehabilitation measures were needed. Beyond this a special hospital was set aside for more comprehensive blind rehabilitation when definitive surgery and medicine were finished. These hospitals became thought of as Rehabilitation Centers for Blindness.

I had been a beneficiary of blind center rehabilitation at Valley Forge General Hospital and Avon Old Farms and then was on the rehabilitation staff at Valley Forge. I maintained liaison with officials at Avon while I was at Valley Forge and I believe I understood the blind rehabilitation philosophy and practices of those two stations. Also I knew the programs that were in operation at Menlo Park Army Hospital (grounds now occupied by Stanford Research International) and the Philadelphia Naval Hospital. The four programs were not coordinated in their practices and personality conflicts among leaders prevented attempts at coordination.

While at Valley Forge and Avon I met and talked with many of the status figures in work for the blind in the United States. I learned that their opinions regarding the Armed Services blind rehabilitation ranged from lack of respect to contempt. I came out of military service at the end of 1947 believing that blind rehabilitation centers for adult blind people were the right approach. Some of the shortcomings of WW II programs were best to be avoided.

By February of 1948 all of the blind rehabilitation of the center type in the armed forces had been abandoned or de-emphasized. Power or influence centers such as the American Foundation for the Blind, Federal Security, and the VA were glad of it and felt that too much tradition out of the past had been ignored by those programs for them to be thought successful. A small group -- C. Warren Bledsoe, Katherine Gruber, Dr. James Grear, Dr. Richard Hoover, Lloyd Greenwood and John Brady of the BVA and I did not agree that all blindness produced by World War II had come about yet and many veterans would need rehabilitation of the center type. Bledsoe persuaded power figures of the VA Medical Department of this need and Hines was chosen to open a Center.

The Hines Center was to be small when contrasted with the size of WW II programs and was to be part of a hospital. The directive document issued to the field by Central Office announcing the opening of the Hines Center specified that only veterans with service connected blindness and whose blindness militated against vocational rehabilitation would be eligible. (A later directive allowed for non-service connected veterans to be admitted.) The document further stated that the Chief of the blind center was granted final authority to determine acceptability of applicants. Veterans could apply no matter where in the country they lived. The Hines VA Hospital would bear the travel costs for acceptable blinded veterans and attendants where requested.

A blinded veteran (myself) whose blindness was service connected was chosen as Chief of the Center. The overall functions of the Center were vested in him within the policies and practices of the large hospital of which it was an organic part. Exceptions were allowed: street and work clothing were worn by veterans in the program rather than hospital dress. All of the personnel of the Center were specialists on blind rehabilitation and medical doctors and nurses were consulted or used for only special circumstances. Blinded veterans in the Center were patients and so classified even though their programs were much different. Being full status patients, the Center's veterans could receive diagnostic and treatment services of the whole hospital to bring their health to the optimum. Blind rehabilitation specialists were on duty to man the Center night and day for every hour of the year.

A Blind Rehabilitation Service meeting held at the CBRC in 1970. Seated (left to right) are Russ Williams, Chief, Blind Rehabilitation Service; Ken Wiley, Social Worker, CBRC; Gene Apple, Chief, WBRC; Nathan Geraths, Social Worker, CBRC; Edward Glass, Psychologist, WBRC; Standing (left to right) Caroll Ault, Social Worker, WBRC; Buck Gillespie, Chief, EBRC; John Malamazian, Chief, CBRC; Wilfred Kingsley, Assistant Chief, EBRC; Tom Knox, Chief, Prosthetics Service; and John Thompson, Assistant Chief, CBRC.

I, as Chief, was responsible for the length of an individual's program within the universally understood policy that about four months would be the limit. I used optimum skill development and confidence to go home as the yardstick for discharge. There were fundamental tenets of the program understood and accepted by staff and patients. The program was directive and veterans were expected always to meet scheduled activities. The scheduled activities were designed to develop skills that would be useful in life when the veteran returned home. The teaching was programmed to be dynamic by making each succeeding step dependent upon successful management of the last step. Veterans were admitted into the program as their applications were found acceptable, thus ensuring that some members of the group were always further along in skills and attitude formation than others. Peer influence and example could be counted on. Within the directive dynamic scheduled program, allowances were always made in pacing for

individual differences in demonstrated abilities. Competition among veterans was not encouraged by staff, knowing that it would often develop between certain veterans anyway. The competition encouraged by staff was between a veteran and what he could aim to become. Expectancy levels were high in the knowledge that experienced staff could know better what and how much the veteran could handle than he did. Trust was built in the staff and program as veterans experienced and understood the demands thus imposed. Our goal was to help the veteran to psychological, physical, intellectual and emotional readiness to make his own choices when he left us.

Braille was for everyone until later when some veterans without hands came aboard. Braille had a success pattern in it for touch, as did all other parts of the program, although none as obviously as Braille. Orientation was known as knowledge of one's position in surroundings. This could be taught and was prerequisite to effective mobility. All senses were involved and taught to the point of trust. An unusually long cane as an external aid to mobility was taught and made respectable. Activities requiring observation and manipulation of tools and materials were required. All senses were used, with task modifications built in as the projects became more complicated. Physical reconditioning was required both for its psychological and physical benefit.

Each veteran had an individual room with basic furnishings that he cleaned and maintained. Privacy was assured in these rooms when the veteran desired. Veterans ate in the general dining room with other hospital patients and staff taught and observed techniques of food management by patients. Swimming and dancing and bowling were a part of the program. Golf came along later as volunteers were included.

Each veteran was fully scheduled, from breakfast to supper, in the activities of the program. Individual differences were respected as successes came more readily to some than others. We had rain and snow gear so that weather would not stop outside participation, thus disallowing weather as a quarter because of blindness. Typewriting and handwriting were skill training vehicles and had probable success patterns built in and future usefulness was also probable. Clothing and personal effects management were carried out but not on an hourly basis as other parts of the program were. With a small staff and patient load, communications were informal and quick with no channels or doors closed. Only one blind person (the Chief) was on the staff and he was seen as willing to do what patients were asked to do and he was required to promote the values which the program espoused.

Dr. Kelso Carroll, Hospital Director, Mr. John Kane, Assistant Director, and other upper hospital officials supported what we were doing. Much comfort came to us in what we were doing from Warren Bledsoe and Katherine Gruber.

We avoided publicity and kept a low national profile to discourage high-powered visitors until we could show some success. When we commenced operations we had, besides the Chief, one secretary, one man with reduced vision in manual skills, one lady in communications skills, the Chief taught Braille, and six men who taught orientation and mobility (O&M) and ran the Center when the Chief was not there. Months were spent in training for skills, philosophy, history and special manners relative to blindness. In response to increase in demand from the Korean War, staff and patient load increased three to four times its original size.

In 1958 after the Hines Center had been in successful operation for more than ten years, I was invited to move to Central Office, Washington, as Chief of Blind Rehabilitation there. I had occasion when Administrator Sumner Whittier visited Hines to make the case that the demand for services at Hines did not represent the need for it that existed in the country. In this job I set about communicating to the VA what the Hines Center could do for blinded veterans and which veterans needed to be influenced to go there.

Russ Williams, Chief of Blind Rehabilitation Service, Mark Graeber, M.D., Chief of Staff, Menlo Park Division, and Gene Applie, Chief, WBRC confer in front of a poster describing Blind Rehabilitation Service.

It took time, but after several years the applications grew in number and a waiting list built. When the waiting list continued to mount, a new Center was planned to be located in the West at the Veterans Administration Hospital, Palo Alto, California. We, in the VA, had cooperated in the establishment of University programs to prepare personnel in blind rehabilitation for adults, thus helping to ensure an adequate number of trained professionals to meet the growing needs of VA's Blind Rehabilitation Service. By the time the Center at Palo Alto opened it had on staff a Chief, L. E. Apple, who had a number of years experience as Chief at Hines, and other personnel who had experience working at Hines. The Center opened in 1967. The waiting list continued to build and a third center opened in 1969. This led, later on, to establishment of other Centers in the VA system.

# CHAPTER 1.
# From the "Hines" Tradition

L. Eugene Apple, Ph.D.
Blind Rehabilitation Research
and
Todd Turansky
Regional Consultant

## BACKGROUND

The Western Blind Rehabilitation Center began operation as a regional comprehensive rehabilitation facility in July 1967 at the Menlo Park Division of the Veterans Administration Medical Center, Palo Alto, California. It was the first major attempt to reproduce the high-quality treatment tradition of the Central Blind Rehabilitation Section at VA Hines, Illinois. In 1947 the Veterans Administration had drawn from the experience of the Army with the war-blinded to establish a center program at Hines for rehabilitating newly blinded veterans. Before the WBRC was opened in 1967, Hines was the only VA comprehensive rehabilitation center for blinded veterans, and the model for similar programs for blinded civilians. The Hines tradition involved values, programs, and techniques which introduced the profession of Orientation and Mobility (O&M) and centers for rehabilitation of newly blinded adults into work for the blind. Its effects are most clearly seen in the lives of thousands of blinded veterans.

The concepts that make up the Hines tradition are a familiar part of rehabilitation today, but were considered bold at the time of their introduction. The following concepts are among the traditions starting at Hines:

1. The center is not a custodial institution, but a therapeutic environment for rehabilitation.
2. The staff of the center should be one organization, with total responsibility for the rehabilitation success of the program.
3. The program's primary strategy is to establish and sustain success pattern in all activities.
4. The success pattern is established by having a full day of one-to-one learning activities, designed to overcome the effects of blindness.
5. The immediate values of the activities are apparent to blinded participants, and their long term values are easily anticipated.
6. The activities in a success pattern are conducted step-by-step, and first present the veteran simple challenges then more and more complex, logically connected challenges.
7. Since managing sight loss is the management of spatial relationships, the center should have its own dedicated space and each veteran should have a private room for which he has responsibility and control while he/she is in the program.
8. Rehabilitation requires much motivation and hard work on the part of the blind person. Good instruction by well trained and qualified staff is key.
9. All mobility and most of the other areas of instruction should be on a one to one basis.
10. Having capable blind persons in key positions who have a mature view and mastery of their sight loss is extremely important to the adjustment of veterans in the program.
11. The sighted staff should always have training under blindfold to insure their understanding of some of the physical effects of sight loss.

12. The center has a professional obligation to train new specialists and conduct research to improve the program and to contribute to the success of all blind persons.

Hines began to experience a substantial backlog in 1962, and expanded its beds from 20 to 30 in 1964. The Vietnam conflict appeared to be growing. The first Vietnam veteran, Robert Phillips, arrived at Hines in 1964 and the prospects for additional casualties from the conflict loomed large. Modern combat medical services saved many more casualties whose severe head injuries caused blindness.

Plans were laid for expansion to two new centers, one in the western and one in the eastern United States. The planning for the new centers was coordinated by Russell C. Williams, Chief of Blind Rehabilitation in VA central office between 1959 and 1975. About thirty new personnel would be needed for each of the new centers. Hines had established graduate clinical training affiliations in both Orientation and Mobility and Rehabilitation Teaching during the early 60's and recruited specialists from among its graduates. To insure the transfer of the Hines treatment traditions, groups of specialists for the new centers were recruited to staff the 1964 expansion at Hines. This allowed them to be indoctrinated to the quality program expected by the VA. There were 11 core staff recruited for transfer from Hines to Palo Alto, including several who became supervisors.

## THE CHANGE: PROGRAMS

Building on the Hines tradition the WBRC developed additional programs for treatment of veterans with low vision, training of family members, training veterans in adapted computer applications, and a program of applied research. The new center was structured according to the Hines model with programs in 5 areas. These were Orientation and Mobility, Manual Skills, Braille, Written Communications, and Counseling. The veterans admitted to the program had six hours of classes per day. Schedules were individualized and rotated weekly. Several new areas were added to the program. An activities of daily living program taught veterans to perform daily task without sight. A low vision program, modeled on the special clinic at Hines, was integrated into the overall program of the center.

There was a new look to the traditional approaches in Manual Skills. The Manual Skills area replaced upgraded projects from those used at Hines. Specific projects promote specific skills needed by a newly blinded person. All projects were reviewed to obtain the same effect in less time, or at less cost with modern modalities.

The WBRC played a leading role in the development of the Blind Rehabilitation Service (BRS) consultant position. The WBRC serves an extremely large geographic area, which creates special challenges not normally encountered by other services at the medical center. To meet these needs the position of regional consultant was established by Blind Rehabilitation Service at the WBRC in 1967 and, later, in each VA blind center. In 1967, George M. (Buck) Gillespie, became the first BRS consultant assigned to a center program when he joined the staff at the WBRC. From 1962 until moving to Palo Alto in 1967, Gillespie provided consultant services for BRS from his home in Connecticut. In 1969 Gillespie was appointed the first chief of the Eastern Blind Rehabilitation Center, West Haven, Connecticut and served in this capacity until 1975. From 1975 until his retirement 1979 Gillespie served as Chief of Blind Rehabilitation Services, VA Central Office.

The regional consultant is a member of the VA Central Office (VACO) Blind Rehabilitation Service staff. All regional consultants are delegated to the field and each now has an office located in one of the four continental VA Blind Rehabilitation Centers. The Blind Center and the Regional Consultant serve the same geographic area. The Regional Consultant based at the WBRC serves a 14-state area, with some 62 VA health care facilities.

Approximately half of the Regional Consultant's time is spent performing field work. The purpose of the field work is to support the Visual Impairment Services (VIS) programs. VIS(T)s are the VA's outpatient based blind rehabilitation service program with the mission of identifying and providing services to blinded veterans. The Regional Consultant supports the VIS(T) programs by conducting site reviews and training sessions. A site review creates a formal written report detailing the consultant's evaluation of the local VIS(T) program. Any recommendations that the regional consultant has to improve the VIS(T) program, are presented to the Director of the VA facility with written reports to VACO.

**PATIENTS**

The center has an alumni group established in 1982, meeting occasionally and publishing a newsletter. The number of veterans treated by the Center each year has grown steadily from about 70 per year in the early days to the current turnover of some 170 or more veterans. The average age and the number of additional disabilities have risen. The earliest veterans had a high percentage of combat related causes of blindness. Over the years this has changed with age related conditions now being, by far, the most frequent causes of sight loss. The number of legally blind veterans and the waiting lists for blind rehabilitation services has risen steadily since 1960. The WBRC, along with the other VA centers, increased the number of veterans it served each year. A new center in Tucson, Arizona will open in 1993 and an additional center in Lebanon, Pennsylvania, is planned for 1994. Consideration is being given to providing direct patient services through VIST programs. An experimental program will open in 1993 at the VA Medical Center in Phoenix, Arizona which will provide a variety of rehabilitation services under the direction of Eldon Harmon, VIST Coordinator.

**LEADERSHIP**

The WBRC was fortunate to be established under the guidance of an experienced and caring hospital management. Lowel Like was the hospital director until his retirement in 1971. William Lee was the assistant director until he transferred to the position of Hospital director VA Fresno in 1972. Mark Graeber was the Chief of Staff for the Menlo Park division and had the direct responsibility for opening and developing the center, until the center was moved to the Palo Alto Division in 1977. The Palo Alto Division was chosen as the site for the center in order for the WBRC to be closer to medical facilities.

**STAFF**

The WBRC staff was recruited from the ranks of mobility, rehabilitation teaching, and manual arts therapists trained in the VA and its university affiliates. Most of the new staff had graduate degrees in their specialty.

There were 4 persons from Hines who became program leaders at the new center. L. E. (Gene) Apple, who had been chief of the Hines program from 1960, was chosen to be the Chief of the new unit. Joy Bailey was a graduate of the Western Michigan University program in Rehabilitation teaching, and was on the Hines staff for 2 years prior to the move. She became the supervisor of Braille and Written communications. Patrick McDonald had 4 years at Hines before the move. He was from the Manual Skills area at Hines and became the supervisor of the new Manual Skills program. Rex Ward was a graduate of the Orientation and Mobility program at Western Michigan University, and had been at Hines for 2 years prior to the move. He became the supervisor of the Orientation and Mobility Program. In addition to leadership personnel, several specialists from each area were indoctrinated at Hines and transferred to the new center. In Orientation and Mobility, Dan Duran and Leo Bailey were transferred. In Manual Skills, Dave Butler and Philip Lapekas were transferred. In Communications, Neil Schulman was transferred. In addition, the secretary for the center, Peggy Smith, was transferred

from Hines. Two other key persons were recruited prior to the opening of the center. James L. Doyle came from a faculty position in the Peripatology program at Boston College to become assistant chief of the center. Doyle was from Boston College's first class of mobility instructors graduated in 1961. He was pivotal in opening the Center, organizing the rehabilitation program, and in setting up the first low vision assessment program. Edward Glass came from a position with Psychology Service to work as the clinical psychologist for the center until his retirement in 1985. Glass was a WW-II service connected blinded veteran, and a graduate of Stanford University. Shortly after the opening Carroll Ault became the social worker before his retirement in 1979. Ault was a WW-II blinded veteran and a graduate social worker educated at the University of Washington.

One break with the Hines Tradition came, in January 1968, when Nancy Darling was hired among the first O&M specialists at the WBRC. She was a graduate of the O&M program at Western Michigan University in 1966, and the first female O&M Specialist in the VA. She had worked with youth for one year at the Florida School for the Blind. Since 1967 Hines and other VA BRC's have hired many female instructors in O&M.

A major challenge has been to recruit the highest calliber of staff. Early in the history of the WBRC the Center benefitted from very competitive salary rates. By the late 1980's inflation and high costs of living in the Bay Area had eroded this advantage. In 1988 special high cost living rates went into effect that reduced, but did not eliminate the recruitment problem. In 1990, in large measure due to the efforts of Joseph Hennessey, the journeyman pay grade for most WBRC personnel was increased from GS-9 to GS-11. This reflected the fact that the majority of staff have graduate degrees. Together the competitive salaries and excellence of rehabilitation provided by the WBRC have allowed for the recruitment of exceptional individuals.

## MEDICAL SUPPORT

Every effort was made to provide a homelike atmosphere in the living quarters of the veterans admitted to the center. In 1967 hospital management agreed that nursing coverage could be provided to the WBRC by the outpatient clinic and designated wards. This change allowed each veteran to develop techniques to manage his own medication. As the patient population became more advanced in age, nursing coverage was increased.

Since the Menlo Park Division services were mostly neuropsychiatric, except for the center, it was decided to refer to the veterans as "students" to distinguish them from "patients". It was felt that, given the instructional nature of the program and the Menlo Park environment, this was a useful distinction for the veterans and their families. The designation was presented to hospital management and they agreed.

## SUBSEQUENT EVENTS, TRENDS

The WBRC became best known for the quality of the low vision program it offered. Carol Kraus was the first low vision specialist, from 1967 to 1970. Marianne May did much of the research between 1969 and 1971 that was necessary to the early development of the program. A renowned low vision optometrist, Edwin B. Mehr, guided the program from 1970 to 1992. A vision psychologist, Greg Goodrich, was added to the staff in 1974 and his research has contributed substantially to the quality of the program. Later a university affiliation with UC Berkeley was added in low vision optometry bringing internships and residencies. The center led the pioneering work to develop a family training program bringing family members of veterans to the center for training. In 1968, Carroll Ault the center's social worker, started the program with volunteer funds and assistance from Carl Ubellar representing the Military Order of the Purple Heart. The training was well received and the other centers started similar efforts. The program was funded by the VA for all centers in 1974.

The WBRC has continued the Hines tradition of university affiliations. It began immediately with an affiliation with California State University Los Angeles, where Larry Blaha (former Hines staff) directed the program to train O&M specialists. Affiliations with Western Michigan University in O&M and Rehabilitation Teaching soon followed. Manual Skills arranged an affiliation with Pacific Union College. Additional affiliations followed and the center now has ties with 6 universities. Appendix 1 indicates the number of clinical training students who have received training at the center.

## BUILDINGS

The history of the WBRC is tied to its buildings. It is the only one of the VA centers planned and constructed as a free-standing blind center.

L. E. "Gene" Apple, first Chief of the WBRC, with nurses and volunteer Marie Dunlap (second from right) in front of entrance to Building 109 (the original home of the WBRC). Marie Dunlap is currently National Veterans Affairs Voluntary Services Representative for United Voluntary Services.

In 1967 the Menlo Park Division of the VA Medical Center, Palo Alto had a rich tradition of its own. Originally the grounds were Camp Fremont, opened in 1917 to train engineers and cavalry soldiers for service in WW-I, and ceded to the US Veterans Bureau in 1923. The landscape architect John McLaren, who designed Golden Gate Park for the city of San Francisco, designed the grounds for the new veterans hospital. The grounds have spacious lawns, a wide variety of trees and tile roofed buildings. During its early days the hospital was primarily for

neuropsychiatric patients, but by 1967 it had opened into a long term care facility with geriatric and nursing home programs, and programs for brain injured veterans. The center opened in building 209, a three-story building next to the entrance to the MPD on Willow Road. This building provided approximately 20,000 square feet of space for the 20 patients, multiple clinics and offices. The building provided easy access to Menlo Park streets, buses, and a small shopping district. Another building had first been chosen for the center, but was discovered to be inadequate after preliminary planning had begun. This discovery, and the consequent search and planning for another building, delayed the opening of the Center from 1966 to 1967.

Two earthquakes were prominent in the history of the WBRC. In February 1971 the San Fernando quake caused the VA to review and strongly revise its earthquake standards. This caused building 209, the WBRC, to be condemned. Space was found for the center, which moved in January 1972 into building 205, in the heart of the Menlo Park Division grounds. It was anticipated that this building would be phased out within a few years because of further revision in building codes.

In the mid-1970's WBRC staff were sent to the VA Medical Center in San Diego to inspect space being made available to Blind Rehabilitation. Plans were made to move equipment and patients to San Diego. Personnel obtained estimates from moving firms to aid the VA in projecting costs. When this approach appeared unfeasible, planning was begun for a new, freestanding building on the Palo Alto Division grounds. That new building was occupied in 1977 and was a proud accomplishment of the VA. The center was named after father Thomas J. Carroll, who had been the chaplain for the war blinded program, and who had opened a comprehensive, civilian blind rehabilitation center.

The 1989 Loma Prieta earthquake came closer to home. The main building at the Palo Alto Division was partly destroyed and is being replaced. While the WBRC had only minor damage, the center was asked to provide space for audiology, podiatry, and the day hospital; services whose quarters were severely damaged. Although housing these guests did not prevent center personnel from administering the rehabilitation program, new programs were put on hold. The last of these guests left the center in July 1992.

## CONCLUSIONS

Several trends will modify the program of the WBRC during the next few years. The greatest changes are likely to result from the increase in the number of elderly blind veterans which calls for further adapting the programs to age related conditions. Generally, this implies developing independence with a less active life style, and the accommodation of additional disabilities and medical conditions. The increases in the number of new blind rehabilitation centers and new personnel, in the VA, are likely to call for a re-examination and reinforcement of the Hines traditions. The VIST program will take over some of the leadership from the centers. The increasing strength of the VIST program will loosen the sense of centralness of the WBRC, as blindness trained VIS coordinators assume the ongoing responsibility for the rehabilitation of blinded veterans.

## CHAPTER 2.
## Low Vision Section

Hector Copado
Supervisor, Low Vision Section

### Introduction

Two years after the WBRC treated its first patient, Carol Krauss became the first blind rehabilitation specialist within the VA system to treat a patient under the newly formed near vision - low vision section. Ms. Krauss was reassigned to the new position from Written Communications by WBRC Chief Loyal E. Apple. In this she became a one person section with the awesome task of developing near vision aspects of veterans' residual vision. At the time, few people across the nation were receiving services, the variety of aids available were few, the types of training programs meager, and the number of trained professionals petty. Some low vision clinics were beginning to show up, but they were rare. Dr. Little, an ophthalmologist, oversaw the veteran's ocular health and was helpful in prescribing an optical aid, but, like most doctors, he was not knowledgeable about low vision. Optometry in the VA did not exist as it does today.

Carol did not have much experience, but as part of a group of young revolutionary professionals, she was eager for change in the country as a whole, and she also saw a need for the development of residual vision. As a result, a need was felt to develop a section which would assist the blind veteran by training him/her to use residual vision in the most effective manner. However, it was Loyal E. Apple whose earlier experiences and insights while Chief at Hines (1960-1967) led him to form a basis for the development of a low vision program.

At Hines, a project under ophthalmology headed by Dr. Robert Penn and Donald Blasch from Blind Rehabilitation had been conducted. The project was assigned ten beds in the ophthalmology section. Patients were assigned for two weeks . Their eye conditions and refractions were done by the doctors. Don Blasch, with the help of Mr. Russ Williams, Chief of the Blind Center, developed exercises for training patients to use optical aids. It included near and distance tasks, varying illumination, and head positions. The training was provided by Larry Blaha, John Malmasian, Stanley Suterko, Jim Lassen, Rich Russo, and Don Blasch.

In the space of two weeks remarkable results were achieved with the partially sighted veterans, and the need for additional beds was evident. Attempts were made to transfer the project from ophthalmology to the Blind Rehabilitation Center, but encountered difficulties; some of the personnel left for California, Mr. Williams was transferred to Washington, D.C., Dr. Penn went into private practice, and Donald Blasch went to Western Michigan University. Fortunately, Mr. Apple, in replacing Mr. Williams as Chief of the CBRC, retained a strong interest in low vision training. At Hines, Apple made attempts to encourage professionals to advocate use of distance aids. His own experiences under the blindfold at Hines had led him to formulate many ideas about the use of residual vision as well, and he and Blasch wrote a paper entitled Severe Visual Impairment (*Long Cane News, 2* (1), 1-4.) that was widely acclaimed. All in all, the impetus, the ambiance was different. The late 50s and early 60s seemed uncritical and complacent with a resistance to change: so too, training under the blindfold prevailed in the VA, and the development of the remaining senses, with the exception of the use of residual vision, were the buzz words of the times.

### The Change

By the end of 1968, times were remarkably different: the ambiance had made a complete turn around: the Tet offensive had begun, King and Kennedy were assassinated. People as a

whole demonstrated for peace, love, and the end of the Viet Nam War. Most important though, was the prevailing anti-establishment attitude of question everything. And so, by the time Gene Apple came to California the opportunity for change was ripe: against the back drop of the Viet Nam War on the one hand and Woodstock (August 1969) on the other he unfolded his two-fold idea. One idea was to get the young O&M staff to develop low vision mobility evaluations; the other was to establish the near vision aspect. Research would be the vehicle that would both support and expand his ideas. The buzz words then became low-vision mobility, visual perception, and functional evaluations.

In the spring of 1969, Marianne May was recruited by Gene Apple from Western Michigan University. She was hired in August of 1969 specifically to assist him in low vision research, although she worked as a mobility instructor for some 6-8 months. Having been formalized as the first researcher at WBRC in January of 1970, Marianne May, an excellent library technician, spent much time researching what literature was available on low vision. Most of the research based interests were oriented towards low vision mobility and distance vision. The monograph written by Apple and May ("Distance Vision and Perceptual Training") and published by the American Foundation for the Blind in 1970, formed the basis for the subsequent development of the low vision program at the WBRC. This is an important part to understand because Carol Krauss closely collaborated with Marianne May during her initial development of the low vision program, and therefore, a literature base quickly developed.

Carol focused on the perceptual aspects of vision and vision training exercises. Much of it was learning by trial and error and on-the-job experience. She also concentrated on assessment tools for near vision and was highly influenced by the functional evaluations and perceptual training experiments in O&M. She worked, tried and re-tried microscopic lenses (recommended by Dr. Little), used training exercises to lower eye fatigue, used puzzles, used the optic-kinetic drum, and near and distant aids of various strengths. If something worked for near tasks, it was recommended to prosthetics for issuance upon the veteran's discharge. Marianne May introduced Carol to the Frostig Figure-Ground Test which, for the first time, was adapted to be administered to the visually impaired. The Frostig was quickly recognized as a very useful tool.

In reviewing some old WBRC Low Vision Section folders (dated 6/70 through 7/71), we found that SRA books were already in use for reading tasks, eccentric fixation was recommended as a form of training, many monoculars/binoculars/clip-on distance telescopes were recommended for mobility, and patients rebelled against having to learn Braille because "they could see". Many records contained the ironic refrain "will not try to read because he claims a doctor told him that straining his eyes would harm them." Krauss also worked on subjective field examinations as advocated by May, but was probably introduced and trained to use these by the new optometry consultant, Dr. Edwin Mehr. Dr. Mehr advocated using the Tangent Screen and band perimeter for determining visual fields. In 1972, Carol Krauss left the VA, but by then she had developed a Low Vision Program manual for near vision tasks. In it she outlined two distinct sections -- evaluation and training. The evaluation part formed the basis for our current practice. In the training section she included principles involved in perceptual training along with 19 lesson plans to improve visual perception. These eventually led to reading comprehension skills. What were most important though, was that she quickly recognized the classroom and one-to-one training approach, and the concept that near vision training would transfer, as well, into individual's distance vision tasks. Dick Gray replaced Carol in 1972. By then Dr. Mehr had been hired as a consultant. Today, the one person section has evolved into 5 staff instructors plus supervisor, two optometrists and optometry residents and interns.

In 1970, Dr. Mehr was the first optometrist hired as a consultant for blind rehabilitation in the VA system. He had established himself in the area in 1951 and had a private practice in the city of Santa Clara. An optometrist, he also had become concerned about the psycho/social problems facing visually impaired persons, and as early as 1964 had collaborated on an article with Dr. Alan Sutich, a local psychologist (Sutich, A.J. & Mehr, E.B. (1964). Journal of the

California Optometric Association, 32 (6), pp. 302-3.). By 1968, he was running a low vision clinic and teaching at the School of Optometry, University of California, Berkeley. He was also a founder and volunteer director of the Vision Rehabilitation Center of Santa Clara County (1968 - 1985). This organization used voluntary services that included, social workers, psychologists, and others, to provide care for low vision, indigent persons of the area. It was through this agency, and coincidence, that he became involved with Carol Ault, Pat McDonald, and the VA. Both Carol Ault (WBRC Social Worker) and Pat McDonald (Chief of Manual Skills) promoted Dr. Mehr and convinced Gene Apple that hiring this gentleman would inject a wealth of experience and innovation into his low vision program. They were right. With Dr. Mehr added, the second phase of the near vision program, low vision examinations, evolved.

As consultant, Dr. Mehr also furthered instruction and development of the training phase, and he played a large role in training the visual skills specialists. He initially saw veterans in his office in Santa Clara. Later, he saw them at the Eye Clinic at the Menlo Park VA, because no equipment was available in the Low Vision Section until 1971. During this period, he spent about one half day per week, and except for the instructor, Carol Krauss, he remained fairly isolated from the rest of the Center. Around 1970 he convinced Apple that Dr. Samuel Genensky's "Marvelous Seeing Machines" (Reader's Digest, January 1971), the closed circuit televisions (CCTVs), were useful for our veterans. By then Dr. Mehr had met Genensky, seen the CCTVs, and had introduced him to the Low Vision Section of the American Academy of Optometry during a meeting held in Beverley Hills in 1968. Mr. Apple persuaded prosthetics to authorize a study on these new instruments. Three great benefits accrued from this study. First, it funded the (from Prosthetics Service) the original equipment for the low vision section. Second it added an additional person to the low vision staff. This person, Alan Frost, transferred from the WBRC's Manual Skills section to aid in the study. Third, the study produced a landmark article demonstrating the degree to which visual function could be restored. The study demonstrated how useful CCTVs were for near tasks and exemplified using the optimum magnification and contrast of the CCTV (compared to optical aids) and showed that reading duration was also a very important factor. This study (Goodrich, G. L., Mehr, E. B., Quillman, R. D., Shaw, H. K. and Wiley, J. K. (1977) A preliminary report on practice effects with low vision aids. *American Journal of Optometry and Physiological Optics. 54* (5), 312-18.) and a follow-up study on veterans using the CCTV in their work and leisure environments were instrumental in the nation-wide adoption of CCTVs as low vision aids (Goodrich, G. L., Apple, L. E., Frost, A., Wood, A. and Darling, N. (1976) A Preliminary Report on Experienced CCTV Users. *American Journal of Optometry and Physiological Optics. 53* (1), 7-15.).

By the early 1970s, Dr. Mehr was working closely with the low vision section and he and Gene Apple realized its successes; they were seeing many patients and getting good results. With the successes came a need for more staff. Ed Mehr worked out an arrangement between the School of Optometry (University of California, Berkeley) and the VA to establish the first optometry internship program in blind rehabilitation (1972). He stopped traveling to the clinic at Berkeley and began receiving his fourth year students, as interns, at the VA. When the WBRC moved to its present location an additional consulting optometrist, Dr. Curt Keswick, was added reflecting the increased need for low vision patient treatment. In 1983, a one year residency in low vision optometry was added, which also helped to meet the need for optometric services. When the Division of Vision and Aging Program started in 1988, a second resident optometrist was added to help alleviate the escalating demand for optometric services.

In 1973, Alice Wood jopined the staff. This increased the number of staff in the section to three: Dick Gray, Chief and Alan Frost and Alice Wood were the instructors. In 1974 Dick Gray retired and Rex Ward became Chief. Under Rex, Alice Wood proposed an instructional manual to delineate the duties of the low vision instructor and optometrist. The manual also formalized the program of the Visual Skills section. The manual outlined the three key ingredients which form the current basis of our section: evaluation, examination, and training. More over, it underscored the growing importance and influence this section had on the WBRC as a whole.

Because of its close ties to WBRC researchers (and the growing low vision literature) the Visual Skills section made significant research contributions to Low Vision training, both for distance and near vision. For example, the first written article on eccentric viewing training was introduced in November 1976 by Holcomb and Goodrich. Dr. Mehr had suggested this study to Holcomb while she was an optometric intern. Greg Goodrich and Dee Quillman in 1976 wrote a subsequent article on this subject that further defined eccentric viewing training techniques. This collaboration, the first of many, occurred soon after Dee became chief of the section. The studies on practice and training with optical aids and CCTVs were further cooperative efforts that were instrumental in delineating the role of training in improving visual function. Other studies dealing with the Frostig Figure-Ground Test, and other numerous articles written by key persons such as Mehr, Goodrich, and Quillman, reflected trends in research and research needs. The buzz words of the 70's became low vision training, eccentric viewing, Senile Macular Degeneration (Age-Related Maculopathy or ARM), and CCTVs.

The Visual Skills Staff soon after the move to Building 48 in 1978. Clockwise Dee Quillman, Chief of Visual Skills, with instructors Neil Greiner, Nancy Darling, Helen Shaw, and Gail Webb.

The 80's saw new directions in research such as contrast sensitivity function and the emphasis turned toward types of training and devices for specific eye diseases. The 80's also saw a need to develop more efficient and cost effective treatments, both in near training techniques and programmatic research. Because he saw a need for continuing education, Dr. Mehr created the Low Vision Journal Group. The group was, initially, a formal educational program developed for residents to present or review articles on topics of current trends or research. Later it expanded to include optometric interns, the low vision section, and research staff, with other WBRC personnel free to drop in. This group was the first, and may be the only, ongoing continuing education program within VAs Blind Rehabilitation Service. Also in the eighties, concerns about the aging of the veteran population and the concomitant increase in ARM became a focal point, as did the technological innovations and inventions in computers and other consumer products that came out of the Silicon Valley. In 1990 Dee Quillman transferred to research and Hector Copado became Chief of the Visual Skills Section.

Against this back drop the Low Vision section entered the 90's with a proliferation of new devices that created a need for the low vision staff to continually gain new knowledge. For example, simple hand held magnifiers were injected with various tints similar to sun glasses, new types of illumination aids became available, telescopes were introduced that have both self

focusing and stabilizing mechanisms, a very large assortment of tinted glasses are available, and optics were redesigned for better quality and durability (hi-index). Re-designs of the CCTV have gone from injection molded type of frames to CCD (Charge Coupled Device) cameras with better contrast and clarity, to portability, to high tech head borne video monitors, to color, to background color only CCTVs. These rapid developments are creating a need for a product evaluation and research subsection of Low Vision, as well as, a need for much greater communication and closer integration of the various WBRC sections, and between all the Centers and Clinics.

The Low Vision Section has evolved to a point where it is responding to veterans needs in ever more sophisticated and effective ways. It continues to help veterans achieve their maximum level of visual functioning and today touches all aspects of their daily life. It has grown from the initial focus of Carol Krauss' endeavors as a near vision section to a comprehensive low Vision Section encompassing the veteran's near, intermediate, and distance visual needs. This is evident in all three parts of the program's structure: evaluation, examination, and training. The proliferation of new devices, training techniques, and continuing research has enhanced the section's ability to satisfy veterans' needs and move toward improvement of their quality of life. The section will continue to respond to future demands, and it is possible that its future will include a true integration with the other sections of the WBRC

# CHAPTER 3.
# Low Vision Mobility Program

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Director, WBRC
William E. Ekstrom
Assistant Director, WBRC
and
Charles T. Vasile
O&M Supervisor

## Background

The decade of the seventies was the decade of low vision development throughout the field of blindness, and the WBRC became widely regarded as an innovator and a leader of this thrust. In 1969 Marianne May joined the O&M staff and became a full time research specialist in low vision. She and the O&M instructors undertook the elusive task of devising an effective low vision travel assessment tool. Since the use of residual vision by low vision travelers had received so little attention throughout the field, the staff was literally starting from the beginning. O&M low vision assessments were devised, tested, modified, and tested and modified again. In 1975, Joseph Hennessey, Supervisor of O&M, authored a paper that outlined a method of conducting a low vision O&M evaluation. This low vision evaluation format seemed to fully capture the essence of a veteran's travel capabilities. It was a series of low vision travel assessment routes that gave O&M instructors a picture from which a program of instruction could be devised.

During the eighties, many additions to teaching low vision emerged with new terminology to describe the new facets of O&M. Charles Vasile, who has served from the latter part of the eighties until the present as supervisor of the O&M Department, has a continued strong interest in low vision methodology. He has made many personal contributions to this area both in techniques and terminology. His recognition and adoption of the techniques and terminology of others have culminated in a very distinct and comprehensive approach to low vision treatment strategies.

When the WBRC treated its first patients in July of 1967, it was a youthful and exuberant group of professionals who offered up instruction during those early days of the WBRC. They were full of confidence that they could meet the challenge of establishing a comprehensive and well-integrated blind rehabilitation program. The average age of the WBRC staff was in their mid to late twenties and the Orientation and Mobility department was no exception. The fiftyish Leo Bailey, who had practiced O&M at the Hines VA, could have easily passed himself off as the father of any one of the other instructors, the majority of whom were under twenty-five. The first Masters Degree O&M programs had been graduating students for seven years. Federal, state and local agencies clamored for their services. "Ten jobs for every graduate exclaimed the recruiters" at the graduate schools. The O&M field was wide open and job mobility was high as the new graduates brought this young profession to the four corners of the country. It was not uncommon to accept a job and find oneself not only the sole O&M instructor in a state, but also the first O&M instructor in the state. This was the milieu out of which the O&M department was brought together. Federal good fortune favored the WBRC at this critical juncture as the VA offered some of the most competitive salaries in the field. When the new O&M staff was assembled, the classical characteristics of a youthful staff emerged. Armed with their new degrees, these fledgling professionals questioned everything. The stodgy, monolithic structure of

the VA was avoided, subverted, and ignored at every turn in the effort to make the WBRC responsive to veteran's needs and to achieve results quickly. It was an exhilarating blend of irreverence and practical purpose that permeated the O&M department.

With the assembly of the new O&M staff came the need to broadly define the department's philosophy. For working with totally blind veterans, the traditional long cane methodology, as perfected at the Hines VA in the previous two decades, was the unqualified choice. It was when examining the approach to take with lessons for a totally blind veteran that the signs of youth rebelling against custom and convention began to surface. While many agencies that provided O&M instruction relied on a standard series of lessons which everyone followed in fixed fashion, the new O&M department at the WBRC felt this a rigid and constricting practice that worked to the detriment of veterans. While they established standard teaching areas, they opted to devise individualized lessons based on the capabilities and limitations of each veteran. At the same time the WBRC was rapidly developing an innovative low vision program. Not only did this program help focus the attention of these young O&M instructors on the area of low vision, but it also provided tools, such as telescopic aids, for them to work with.

**The Change**

Prior to the opening of the WBRC, Hines had developed a low vision program and experimented with devising low vision training routes. Yet it was at the WBRC that low vision mobility began to reach its full potential. This innovative approach continues to be followed today at the WBRC, enabling instructors to exercise great latitude in training the capabilities of the veteran, as well as working within the unique travel environment to which the veteran will return upon discharge. These freewheeling thinkers noted that many professionals and agencies trained partially sighted individuals in the same manner as totally blind individuals. Typically this was done by blindfolding those who had some usable vision and teaching them as if they were totally blind. The WBRC O&M instructors came to a consensus that they should make use of the veteran's remaining vision. They reasoned that as soon as the veteran takes the blindfold off, he/she will revert to relying on his/her remaining vision while traveling.

The upshot of their questioning was to discard the blindfold in favor of combining the use of vision with the traditional long cane skills. At one very brief point, use of the blindfold ceased altogether. The pendulum quickly swung back a bit and the blindfold was reincorporated as a training tool for selected situations to be determined on a case-by-case basis. In concert with this approach, a rudimentary O&M low vision assessment check list was devised and used until 1969. There developed a general perception among the O&M staff that this checklist, while somewhat helpful, did not address the central issues of assessing low vision O&M capabilities and needs. Gene Apple, the Director of the WBRC, recognized that the question of addressing the low vision needs of the veterans was a center wide issue. In what is perhaps the most historic moment in the history of the WBRC, he initiated a center wide effort to develop low vision programs.

The young staff had many ideas and were quick to debate the pros and cons of each. Numerous spirited and sometimes fiery discourses took place as they tried to develop an evaluation tool. An evolutionary process began and continued at a rapid rate through the early seventies. O&M low vision assessments were devised, tested, modified, and tested and modified again. With each modification and change the evaluation tools became better. This process slowed down but continued into the mid seventies. Then Joseph Hennessey, Supervisor of O&M, authored a paper "A Pragmatic Solution to the Orientation and Mobility Needs of a Low Vision Client" (Hennessey, J.J., 1975, AAWB Blindness Annual, pages 80-7) which outlined a method of conducting a low vision O&M evaluation. Working closely with Donald Cooper, whose O&M background included ETA research, as well as considerable experience in devising O&M low vision evaluations, a low vision evaluation format was devised that seemed to fully

captured the essence of a veteran's travel capabilities. The result was a series of low vision travel assessment routes that gave O&M instructors a picture from which a program of instruction could be devised.

An early group of O&M instructors. Clockwise from left: Nancy Darling, Steve dizel, Bill Ekstrom (reclining), Joe Hennessey, Don Cooper, Matt Angus, Marianne May, Leo Bailey, Fletcher McDonald (O&M Assistant Chief), Carl Westrom (medical liaison),and Jack Wooling (O&M Chief).

This format is used today and is the cornerstone of contemporary low vision travel assessment. With the implementation of a viable travel assessment tool, the focus of O&M low vision innovation and development turned to the training component. The emphasis remained here through the seventies and increased during the eighties. Concurrent with the O&M Department's grappling with the problems of low vision travel assessment, a separate and distinct Low Vision Department came into existence. With a goal of optimizing a veteran's visual function it exerted a major influence throughout the center and its findings and recommendations became an integral part of O&M low vision training.

Accurate visual acuities, visual fields, eccentric viewing angles, color perception, and contrast sensitivity were now factored in the equation of prescribing a low vision program. Prescription lenses, monoculars and tinted lenses had become a part of O&M instruction. By the eighties this body of knowledge had crystallized. The complexities and intricacies of teaching monoculars, using tinted lenses, or using prescriptive lenses in dynamic travel situations had begun to reveal generalized strategies and methods for integrating these aids into travel. This knowledge was shared among the O&M staff and a standard low vision methodology began to emerge. During this period, use of the cane by low vision travelers came under rigorous scrutiny, and modifications evolved such as the verification cane technique that were more effective and appropriate in meeting the needs and goals of this growing population of travelers.

Many subtle additions to teaching a low vision traveler emerged, and with this expansion came new terminology and jargon to describe these new facets of O&M. During the early eighties Charles Vasile served as the O&M Intern Supervisor, and from the latter part of the eighties until the present, as the Supervisor of the O&M Department. It is his continued strong

interest in low vision methodology, his many personal contributions to this area both in techniques and terminology, and his recognition and adoption of the techniques and terminology of others that have culminated in a very distinct and comprehensive approach to low vision treatment strategies. Due to his influence such terms as lag left, volume controlled intersection, and auditory surge are now routinely used within the O&M Department to more precisely define O&M elements. A few of these terms are defined below to illustrate both the complexity of blind travel and the efficiency of the terminology in capturing elaborate concepts:

1. Lag Lefts: Traffic light controlled intersections that have independent left hand turn lanes, which permit left hand turning (green arrows) before the straight through traffic begins and again after the same straight through traffic stops.

2. Volume Controlled Intersections: Major multi-lane traffic light controlled intersections which (through an electronic sensor located on the light standard or under the street) give the most go (green light) time to the lanes with the most volume of traffic.

3. Auditory Surge: At traffic light controlled intersections, the smooth, even, and consistent engine acceleration sounds made by two or more consecutive vehicles at the beginning of the green light. This movement, when present in the nearest parallel traffic lane to the line of travel of a partially sighted person, can be monitored auditorially, as a cue that the light has just turned green and it is time to begin crossing the perpendicular street.

4. Visual Surge: At traffic light controlled intersections, the smooth, even, and consistent engine acceleration sounds made by two or more consecutive vehicles at the beginning of the green light. This movement, when present in the nearest parallel traffic lane to the line of travel of a partially sighted person, can be monitored visually, as a cue that the light has just turned green and it is time to begin crossing the perpendicular street.

With the component of vision added to mobility, a need to consider situations from both visual and non visual perspectives developed. At street crossings the traveler may use the auditory surge, the visual surge, or the sight on light (use of the traffic light itself by a traveler who can consistently and accurately visually read the traffic light). What started out as a broad philosophical change has developed into a comprehensive subspecialty at the WBRC.

At this silver anniversary, the WBRC can proudly look back upon the accomplishments of the O&M Department. The vision of a better treatment modality for partially sighted travelers has been realized and is now manifested by a distinct teaching methodology. With ten to twelve O&M interns a year at the WBRC, and WBRC O&M instructors periodically moving to other agencies, the WBRC low vision approach is being felt out in the field. The O&M department is currently writing a low vision O&M manual that could serve as a vehicle to further disseminate their approach to practitioners throughout the field. Someday they may be viewed as the group who wrote the book; yet, they know that this is really an ongoing journal and they will continue to search for the next chapter.

# CHAPTER 4.
# Electronic Travel Aids Program

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## Background

In 1969 VA Prosthetics Research initiated a project to field test the Bionic C-4 Laser Cane. Testing sites were at the WBRC and the Hines Central Blind Rehabilitation Section. At WBRC two Mobility Instructors, William Ekstrom and Matthew Angus, were selected for this project.

In 1971 a similar project began with the Sonic Guide, an electronic travel aid built into a pair of glasses. In the Fall of 1971 William Ekstrom participated in a field evaluation, at the WBRC and Hines, leading to this device becoming available as a prosthetic item. All VA O&M instructors were trained in the use of the Sonic Guide, Laser Cane, and Pathsounder. Electronic Travel Aids became an established part of the VA's blind rehabilitation program.

As we have moved into the age of electronics, the idea of an electronic device that would enable a blind person to move about freely has been a tantalizing prospect. From a conceptual standpoint, the ultimate electronic aid would be a device that would obviate the need for a long cane or a dog guide. While some inventors began their work with this goal in mind, they soon found that the process of traveling without vision is quite complex, and is critically dependent upon the blind traveler consistently receiving, and accurately interpreting, a wide variety of environmental information. Typically, inventors have focused on developing object detectors, but while the detection of objects is vitally important to a blind traveler, many other elements such as drop-off detection, line of travel, and other factors are equally important to the traveler. As they have come to appreciate these complexities, they have either abandoned their efforts to devise such a sophisticated aid or they have scaled back expectations for their travel aid. Other inventors have started with the more modest approach of devising an electronic travel aid that could be used in conjunction with a long cane or a dog guide. Since the sixties a number of these supplementary type travel aids have been devised. Some were never developed beyond prototypes while others were fully developed into commercially available products.

The VA has consistently been a leader in evaluating, testing and issuing electronic travel aids and the WBRC has always been a part of this process. When the WBRC opened in 1967 there were two electronic travel aids, the Kay Torch and the Lindsey Russell Pathfinder, that were available . Both of these aids were fairly simple object detectors. Although the WBRC quickly obtained each device, limitations of these two devices precluded them from being actively incorporated into the ongoing program of the Center. In the ensuing years a very small number of Pathfinders were issued. Typically they were issued to veterans with multiple medical problems in order to meet a unique need that the veterans had in their home area.

## The Change

In 1969 Prosthetics Research in New York initiated a project to field test the Bionic C-4 Laser Cane. Testing sites were at the WBRC and CBRC (Hines, Illinois). At the WBRC two Mobility Instructors, William Ekstrom and Matthew Angus, began work on this project. Donald Cooper replaced Matthew Angus shortly after the beginning of the project. The project involved determining the capabilities of the Laser Cane, developing a teaching curriculum, and teaching four veterans to use this cane. At the conclusion of the training the four veterans were videotaped while traveling with and without the Laser Cane. Six months later the two instructors traveled to the veterans' homes and videotaped them traveling in their home areas. These tapes, and tapes of the Hines veterans, were shown to O&M instructors who then rated their travel. While the ratings produced little significant differences in travel between the Laser Cane and the long cane, many of the users preferred the early warning that the Laser Cane provided. Following this project the Laser Cane became available for issuance as a prosthetic item.

Dick Bennett (wearing Sonic Guide) and Bill Ekstrom conduct research with the Sonic Guide.

In 1971 a similar project was begun with the Sonic Guide, an electronic travel aid built into a pair of glasses. In the Fall of 1971 William Ekstrom went to Western Michigan University for a four week training program that was presented by Dr. Leslie Kay and his staff. Following the completion of this training a field evaluation was conducted with several veterans at the WBRC and Hines, leading to this device becoming available as a prosthetic item. With the availability

of these electronic travel aids, the VA decided to train all O&M instructors in the use of the Sonic Guide, Laser Cane and Pathfinder. Western Michigan University set up a year long series of one month training programs that were attended by all VA O&M instructors as well as instructors from other interested agencies. Electronic Travel Aids were now an established part of the VA's blind rehabilitation program.

Additional electronic travel aids have been reviewed and evaluated by the WBRC. In 1980 the Mowat Sensor, a hand held ultrasonic object detector, was evaluated by the VA. At the WBRC Diane Morrissette had assumed the position of O&M Research Specialist and conducted a project under which veterans were trained with Mowat Sensors. This led to the Mowat Sensor being added to the list of ETAs issued.

Ms. Morrissette also worked with the Rehabilitation Research and Development group at this VAMC on a project to develop a Head High Object Detector, a head born object detector designed to provide both early warning of objects that could not be detected by the cane, as well as to provide some spatial awareness of the immediate environment. A prototype was developed; however, the project was discontinued because a similar device was being developed in Japan. The Japanese device has not been marketed. The knowledge gained from working on the Head High Object Detector was put to use by Howard Lauren, an O&M Instructor, and Jan Mckinley, a research specialist. They initiated a project on a travel aid dubbed the MISS (Minimal Information Sensor System). The rational behind this project was to develop a travel aid that would supplement the long cane or dog guide, and provide a simple go/no go sensor capable of detecting objects above waist level. An important finding from this project was that the critical detection distance, for blind travelers, was equivalent to the length of a long cane. It was less important to sense objects beyond this distance. A critical aspect of the design parameters was that the device be kept simple.

In the eighties, the Nottingham Obstacle Detector (NOD), which was similar to the Mowat Sensor, was evaluated but not recommended for issuance. During the Spring of 1990 Ms Jan McKinley, research specialist, in conjunction with the O&M Department, evaluated and recommended for issuance the Sensory 6. This device is a spectacle mounted obstacle detector that functions similarly to the hand held Mowat Sensor. An evaluation of the Sonic Pathfinder commenced in 1991 with Jan McKinley coordinating the project. The Pathfinder is an outgrowth of the Nottingham Obstacle Detector research and is being conducted by Dr. Tony Heyes of the Royal Guide Dogs Associations of Australia. Several of the O&M Staff were trained to teach the Sonic Pathfinder and the project will continue through 1992.

During the two and one half decades that the WBRC has been providing services, ETAs have offered some limited assistance to blind travelers who use them in conjunction with the complex skills of traveling with a cane or a dog guide. The hope for an ETA that will replace the long cane or the dog guide continues to be an alluring, yet elusive dream, however, supplemental electronic travel aids are now offering some assistance to travelers and the aids continue to be improved.

# CHAPTER 5.
# The Family Program

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Blind Rehabilitation Research

## BACKGROUND

The family program offers one week of training to one family member or caregiver of each veteran at the Western Blind Rehabilitation Center (WBRC) during the time the veteran is in the rehabilitation program. The family program became a formal part of the WBRC in 1972, when its benefits had been demonstrated by several years of volunteer support. The program evolved from the "Operation Reindeer" of the Military Order of the Purple Heart (MOPH), for which Carl Ubelhoer was the representative. In 1967 the Center arranged for funding from MOPH for several veterans to go home for the Christmas Holidays. The effects were very positive. In subsequent discussions it was found that MOPH could provide funding to bring a family member to the center, but could not provide lodging. The Disabled American Veterans (DAV), represented by Roger Hernandez, volunteered to support the housing of family members brought in for the family program. Hospital management under Mark P. Graeber, M.D., Chief of Staff, and Abraham T. Gottlieb, M.D., Director, approved and the family program was born. Carroll Ault the social worker for the Center conceived of the program and served as its first coordinator.

The response of family members and veterans to such training was universally positive, so that MOPH and DAV agreed to sponsor the training of family members of all veterans entering the WBRC. The blind rehabilitation centers at Hines and West Haven also sought volunteer support to begin their own family training programs. Their success with the program attracted agency interest. On December 5, 1972 the VA, in a letter from M.J. Musser, M.D., Chief Medical Director, notified the blind rehabilitation centers that the agency would assume financial support of the family programs.

## THE CHANGE

Although the Hines tradition contained social work support for veterans, it was the WBRC that conceived and implemented the idea of including family members in the rehabilitation process. The goal of the family program is to provide an opportunity for family members to visit the WBRC in Palo Alto, and to gain insight into the rehabilitation process, the ramifications of sight loss and the veteran's adjustment to sight loss. The program has several steps, as follows:

1. Shortly after the veteran arrives at the WBRC the Coordinator of the program meets with the veteran to discuss the family training program. They discuss how sight loss has affected home/family life. The Coordinator and veteran determine which family member or caregiver will visit the WBRC, and the dates of that visit. Visits are usually scheduled during the week preceeding the week of the veteran's completion of the rehabilitation program. The last week of the veteran's program can then be used to resolve any further needs of the veteran as identified by the family member. Although more than one family member is welcome to participate, the Department of Veterans Affairs can provide funding for one person only.

2. The Coordinator contacts the family member or caregiver by phone, and explains the program. A packet of information is sent which includes general information about low vision and blindness, and discusses social and communication skills for assisting visually impaired persons. The packet includes specifics about the family training program, the WBRC, and a letter from the Coordinator. The family member usually arrives in San Francisco on a Monday morning and is met at the baggage claim area of the airport and is taken to the WBRC in Palo Alto to begin the training program.

3. The Coordinator meets with family members on arrival day and orients them to the WBRC. They receive information about their WBRC schedule, motels, taxis, meals, and other important factors.

Caroll Ault (left) with veteran and family member discuss the family training program.

4. The family member spends the next few days receiving instruction and information, and participating in discussions with staff members. They are given "sighted guide" training and acquainted with the latest research on visual impairment. They may be asked to wear a set of goggles or blindfold which simulates the visual impairment of their family member who is undergoing rehabilitation. They observe the veteran during instruction sessions in such areas as mobility, reading, writing, and cooking. They are shown several videotapes on eye conditions and on adjustment to sight loss by individuals and families. The family member also meets with the nurse, dietitian, recreation therapist, psychologist and researchers. Toward the end of the week the family member meets with the Coordinator and clinical psychologist to summarize the information obtained during the stay and reflect on what was learned. Future plans are discussed and resource and referral information provided. The veteran and the family member are reminded that sight loss is a shared disability and that the rehabilitation process will continue long after the experience at the WBRC is over. Family members are encouraged by the Coordinator to provide their inpressions of the effectiveness of the family training program.

5. Family members complete their training on Friday and are transported to the airport for their return home. Each veteran spends the remaining week(s) completing his/her rehabilitation program.

The first Social Work Service coordinator for the family training program was Carroll Ault, who was at the center from 1968 until his retirement in 1979. He was followed by two other social workers: Arlene Dumas and Dennis Radigan. In 1984 Arlene Dumas and Alan D. Sadowsky published a description of the program in an article entitled "A Family Training Program for Adventitiously Blinded and Low vision Veterans" which was published by the Journal of Visual Impairment and Blindness. Coordination of the program changed in 1987 when Social Work Service abolished the position assigned to the Center. After a brief interim the WBRC provided staff coverage for the program. Andre De Cordova, in 1987, became the first WBRC staff member assigned to this program. In 1990 he left to move to Japan and Sheri Johnson was appointed to the position in 1990. The family training program has trained family members of approximately 50% of the veterans going through the program since it began in 1972.

A major expansion of the family program began in 1987 when Joseph J. Hennessey, WBRC Director, received approval to build two apartments for the use of the family training program. These were to be located on the second floor of the WBRC. He argued that apartments at the WBRC would avoid the costs of motel and local transportation, as well as provide a qualitative improvement to the program. Construction of the apartments was completed just prior to the Loma Prieta earthquake in 1989. Following the earthquake the WBRC became host to medical programs displaced by the earthquake and the apartments were used by them from 1989 to 1992. The expansion of the family program began fully in 1992.

## CONCLUSIONS

The family training program is a major element of the overall comprehensive rehabilitation program offered at the WBRC. In the future it is expected to emphasize the following:

1. Planning and provision for the initial home experiences of veterans after completing the program (i.e., school, vocational pursuit, or hobby).
2. Identification of areas of need through follow-up on the quality of life experienced by discharged veterans.

## CHAPTER 6.
## Evolving Programs in Manual Skills

Patrick McDonald
Chief, Manual Skills Section

### Manual Skills- "The Hines Way"

At the Hines Central Blind Rehabilitation Section (CBRS) in 1967, the majority of staff were WW-II Veterans who had worked there for 20 years. They had taken blind rehabilitation from its infancy of trial and error to a fully evolved program with proven methods and a twenty-year tradition. Every client veteran used a blindfold unless he was totally blind. The goals and objectives were set in concrete. The lessons were outlined "by the numbers" and each veteran successfully completed every lesson before going on to the next lesson.

Manual Skills was divided into the basic and advanced shop areas. In the basic shop, which was pre-vocational and goal oriented. Every veteran completed a link belt, laced a key case and a wallet, a reed-seat footstool, and wove a rug on a floor loom. In the advanced shop, the veteran completed a wood footstool from a 4-foot length of pre-cut pine. The next project was to practice wood-turning of a lamp from a piece of pine on a lathe. Most of these lathe projects were never finished and were discarded. Then the veterans would complete a hardwood lamp similar in design to the usually discarded lamp. The veterans' final project was either a wood turned nut bowl with a French polish, or a roto-rule done in the metal area. The whole program took approximately 16 weeks.

A little deviation from the norm was allowed, but only a little. It was the "old timers" way of humoring the "new kids", as we were referred to at that time. Any more than a minute deviation, regardless of what it was, was responded to by the old timers with the phrase "That was tried years ago and it didn't work out too well." After a few attempts at change, most of the young people would be reasonable and do things "The Hines Way" and it seemed to work out well.

### The Change -- Goals and Objectives

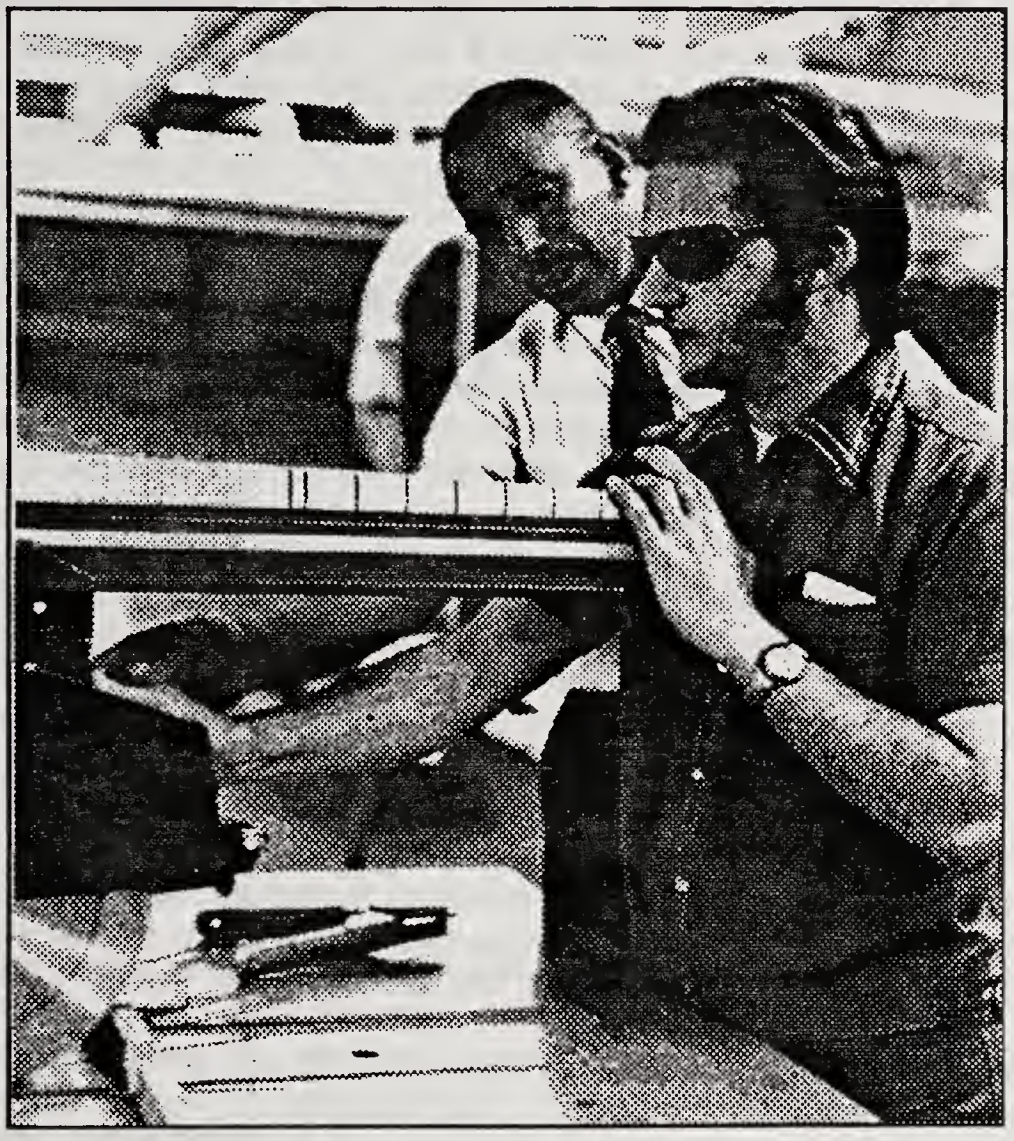
The goals and objectives of the WBRC were originated at Hines. The purpose of the basic skills area was to develop finger dexterity, tactual perception, bi-manual coordination, and hand strength. Further goals were the development of hand-foot coordination and memory retention for the sequence of operations. Additional goals were to develop self-pride by project completion, and a success pattern by completing a series of increasingly difficult projects. This was culminated with the formulation of a post-center vocational plan.

In the advanced area goals and objectives were stressed, with the additional introduction of safe and effective use and operation of power machines in the wood and metal shops. The power machines used in the wood shop were the table saw, belt sander, disc sander, drill press, joiner, portable orbital sander, wood lathe and portable hand drill. The power machines used in the metal shop were the metal lathe, metal shaper, buffer and power hacksaw. In addition to the power machines used in training, the surface planer, radial saw, power miter box, band sander, and router were added to the WBRC program.

The overall goal was to build an active, independent, well-adjusted individual who was able to cope with the problems and frustrations of every day life by using the new skills and techniques that he or she learned in the comprehensive rehabilitation center setting.

**Staff Training**

The training method for new staff members was to teach them to perform the same projects that the veterans were asked to complete. Goals and objectives were indoctrinated along with the hands-on completion of projects. The new staff were then assigned to blinded veterans and were supervised by one of the experienced instructors. The experienced instructors took on the role of the old timers and disagreed with the new instructors, who wanted to try something new. The old timers were Patrick McDonald, David Butler, and Phillip Lapekas, all of whom came from Hines in 1967.



Charles Knight working with a student using a radial arm saw.

**Manual Skills -- Early Beginnings**

On February 2, 1967, I joined L. E. Apple, and Elizabeth "Peggy" Smith, who were the first two arrivals at the new WBRC. They had been given office space in a former conference room of Building 110. Shortly after I arrived Rex Ward, Buck Gillespie, Dan Duran, Leo and Mrs. Bailey arrived and the office became crowded. My duties were to purchase anything that belonged in the new building, and that was needed to run a blind center. This included everything from furniture to waste baskets. The task meant counting the rooms and figuring out how many of each item were to be used in each room of the building, including the Manual Skills area.

Eventually things fell into place and staff recruitment became the primary concern. Richard Gray, a former Manual Arts Therapist was recruited from Reno, Nevada, where he was working as a teacher. Neil Greiner was recruited from Manual Arts Therapy at the Menlo Park Division where he ran a machine shop program. After recruiting Neil, we were told to look beyond the Menlo Park grounds. The original staff of Manual Skills numbered five and the Center bed count was twenty beds. David Butler, Phil Lapekas, Richard Gray, Neil Greiner, and I were the initial five instructors.

**Early Variations**

Since the basic cadre was a mixed lot, with diverse backgrounds and experiences, there was a lot of disagreement as to the Manual Skills philosophy. What was to be accomplished in the time allotted, the techniques to be used, and projects to be completed were issues to be discussed and decided. Mutual agreement was important if there was to be a consistent team approach, and because instructors were exchanging students it was important to keep a consistent teaching philosophy. Exchanging students was necessary to keep the scheduling of classes from approaching gridlock.

Initially there were only a few veterans at the WBRC. The scheduling of classes was done by the supervisors and there were few problems. After Mr. James Doyle became the assistant chief, he did the weekly schedule for 20 veterans, responding to requests from all of the sections and all of the instructors. Mr. Doyle worked closely with the supervisors to work out compromises when there were weekly schedule conflicts. When I had received my initial blind rehabilitation training at Hines I was trained by not one, but all of the mobility instructors. I felt that each instructor had given me something special, and that this diversity greatly enhanced my training. As a result, I had a lasting philosophy that if one had several instructors in an area, he would receive a more well-rounded rehabilitation experience. Based on this philosophy Mr. Doyle and I worked out a schedule that routinely changed the students assigned to the Manual Skills staff. At first, this was a problem for some instructors, but soon it became an accepted practice. A benefit was that it makes student scheduling much easier, however, since this philosophy was never carried over into the other sections, scheduling remains a problem.

Early in the evolution of the Manual Skills program, some of the new instructors wanted to discard most of the basic skills projects and get on to the advanced shop projects. Other new instructors decided that they didn't have enough experience to have an opinion. The former Hines instructors wanted to stay with the way things were done at Hines.

The most significant change to evolve at the WBRC was in the use of the blindfold, which, though traditional at Hines, was abandoned. The blindfold slowed the students' progress, resulting in many veterans not getting into the advanced shop since they weren't at the Center long enough. Since it was in the wood shop where student's attitudes changed, their confidence was restored, and their pride in workmanship was gained, we felt it important that all students receive instruction in the advanced shop.

Based upon our new experience, and the evolving philosophy of Manual Skills, many changes were made from the "Hines tradition." These included:

> The single link belt was replaced by a more difficult double link belt, as the single link belt was too easy. A more difficult belt increased the dexterity and amount of hand-finger work. One of the lacing projects was discontinued altogether as two lacing projects took too much time, and the resulting gain in fine tactual skill was sufficient with one lacing project.

At Hines, every client completed a rug. This was changed to an optional project as most of the clients already had good hand-foot coordination. An exception was that the rug weaving was still completed by amputees (who needed work with prosthetic limbs), for veterans with left-right travel problems, and for veterans with memory problems who could not remember sequences of operations.

The reed-seat footstool that was done in the basic area was deleted, as there was also a wood foot stool done in the woodshop and there was no need for the duplication. The goals and objectives of the project could also be obtained using the woodshop footstool.

The copper picture was brought into the basic shop when another project to develop hand strength was needed. This project also brought in the use of plastic resin for filling the backs of the pictures, liver of sulfur for bluing, and contact cement for gluing the finished pictures to masonite backing. Spray painting of clear lacquer was also implemented with this project.

The picture frame was initiated in the woodshop as the copper pictures needed wood frames to really look sharp. Picture framing was also a ready made hobby with inexpensive materials and a high return.

The wood footstool was still made, but as an optional project.

The telescopic click rule became the primary means of measurement, and because many were disappearing, it was decided to start making them in the metal area. The former roto-rule metal project was not really much of a project and its uses were minimal compared to the click rule.

The wood turned bowl became an optional project and was then discontinued in favor of a segmented bowl. The segmented bowl provided more work for the veteran, more skill building, and more satisfaction restored. About this time lamination became the way to build larger projects as wood costs were rising and the budget was not.

Practice wood lamps (wood turning) were discontinued because most were never finished and did not result in a finished product for the veteran. Wood costs were rising and we could afford no waste.

Wood "cutting boards" out of hardwood became another project area as we were getting a lot of long narrow scrap and utilization of the scraps was an economic necessity. Formerly this wood was pre-cut for a wood footstool and there were fewer scraps.

**New Techniques and Programs**

As a group, we decided to teach all of the power tools in the shop, including the radial arm saw, to all of the veterans and skipping a power tool was to become the exception. Since the radial saw had never been taught before to all visually impaired veterans, no one could agree on how to go about it. As a result we decided that each of us would work out his own technique for teaching the radial arm saw, and then we would all get together and demonstrate the techniques to each other. There was mass hostility among us and all disagreed until Richard Gray demonstrated his technique using the telescopic click rule. Instantly there was mass agreement and all of the instructors started using the click rulers, which formerly had lain unused in the tool cabinet. Not only did the click rulers work on the radial saw, but they worked just as easily on all of the other machines and on the benches. It wasn't long before click rules started to disappear. When this happened we realized that the students appreciated them also. Since click

rules cost about $30.00, at the time, this created a problem since it was getting too expensive to supply all of the veterans.

In 1969, Neil Greiner suggested that we start making click rulers instead of the roto-rule project. He redesigned the click rule using brass all-thread, and enlarged the thread in the thumbscrew. It was soon apparent that the veterans preferred our click rule to those from the American Foundation for the Blind. Few of the Shop's click rules disappeared after we made them a project. Today all of the VA Blind Rehabilitation programs use the click rule.

About the same time, Neil Greiner designed the May Cam Cane which is still used at this and other Centers. He also designed an excellent collapsible cane that was very popular and was made as a project. The collapsible cane project had to be discontinued when veterans wanted them repaired, and we had no workable system to repair them.

In 1967, it was apparent that the Manual Skills area was the only area without a Master's degree internship program. David Butler and I started attending San Francisco State University with the assistance of Pete Wurzburger, who was a former Hines mobility instructor, and who headed the San Francisco State Mobility Program. By 1969 Phil Lapekas also started classes, and both he and David Butler resigned from the Manual Skills Area to accept positions as rehabilitation assistants at the WBRC. James Georgeson and Charles Knight replaced them. Jim came right out of school at Pacifica Union College in Anguin, California. Charles Knight came from Tuskeegee University and was just out of the Job Corps.

**The Intern Program**

Since beginning the Manual Skills program in 1967 we had been making unsuccessful attempts to obtain a clinical affiliation with either industrial education programs at San Francisco State or San Jose State Universities. Jim Georgeson made contact with Dr. Fischer, Chairman of the Industrial Education Department at Pacifica Union College Chairman of the Industrial Education Department. In 1970, we set up our first clinical affiliation with Pacific Union College. This was in effect for 2 years and we received several interns, among them Wayne Gaver, Bronson Goo, and Miles Choy.

One problem with the intern program was that they received no special on campus instruction in blind rehabilitation skills, and all their instruction had to be given by the Manual Skills Staff during the internship. This included in-service training in all of the other sections and the interns were here for about half their internship before they could begin teaching in the Manual Skills Area. As a result the program was discontinued.

**The Future**

The WBRC will continue to admit blinded veterans who are still in their employment years, but it is the increasing number of older veterans for whom the Manual Skills program will be adjusted. The present program is geared for younger, more active veterans, but projects are now being developed for veterans who require a less active life style. Efforts are also being made to measure the impact of the program on the rehabilitation of veterans. It is anticipated that the internship program will need to be revived to meet the staff needs of Blind Rehabilitation Service as it expands over the next few years.

# CHAPTER 7.
# WBRC Research: 1969 to 1992

Gregory L. Goodrich, Ph.D.
Research Psychologist

## Introduction

The Western Blind Rehabilitation Center (WBRC) has richly contributed to the growth of knowledge on vision rehabilitation. Many individuals have contributed their time and efforts to this research. This chapter introduces each person as they began work at the WBRC and describes their contributions. If there is a story within this chapter it is of the many people who have participated in the WBRC's success in translating technology and research into clinical practice. These include not only the researchers, but also the clinical staff of the WBRC. They have always shown a receptivity to research, and an open-mindedness, that grows from constantly seeking a better way to serve their veteran clients. Among the many who have well served the research activities of the WBRC are Richard Bennett and Tim Mayer. Both Dick and Tim died of untimely illnesses while working at the WBRC. It is fitting that this chapter be in memorium to their friendship and dedication.

The research philosophy developed over the past 25 years is that the WBRC and the blinded veteran population are best served by research performed in direct support of the clinical program. Research has served as a bridge between more basic research and development and the clinical program. This was the case when new technology, such as electronic travel aids or accessible computers, was introduced. Important areas of need are identified within the clinical program and research can be focused on these areas to develop solutions, as was the case with the development of eccentric viewing techniques for veterans with central scotomas. Research provides resources and knowledge not available within the clinical program. For example, when Blind Rehabilitation Service required estimates of the numbers of legally blind veterans in order to begin planning for needed services for an aging veteran population. Although researchers have less day-to-day interaction with WBRC students than does the clinical staff, they are very much a part of the WBRC rehabilitation program.

## WBRC Research - The Change from the Hines Tradition

The Hines tradition had included the need for research within its clinical program; Gene Apple, in organizing the WBRC, envisioned research as a separate entity, staffed by highly trained investigators. Developing a separate identity for research, yet retaining its focus on the clinical program and the needs of visually impaired veterans, was a major departure from the Hines tradition. In 1969 WBRC research was composed of one person who had been promised a research opportunity. Today, WBRC research consists of three full-time individuals who have cooperative research projects with numerous other WBRC staff and investigators.

Research is, by definition, a task of questioning, exploring, and innovating, and this fit well with the mind-set of the original WBRC staff, who were ready to question and explore new and better ways of doing things. In 1969 Ms. Marianne May was recruited as the WBRC's first full-time researcher. She was hired directly from the Orientation and Mobility Masters program at Western Michigan University. Her thesis research project focused on kinesics training and her first assignment at the WBRC was to the mobility department with the understanding that this would lead to a research assignment. In early 1970 a separate office was provided and the research position formalized with an emphasis on low vision. In 1970 William Ekstrom and

Mathew Angus began research on electronic travel aids, splitting their time evenly between research and the Mobility Department.

## Mobility Research

The WBRC's research work on electronic travel aids is detailed in Chapter 3. One important theme which began with the earliest electronic travel aid research was that of close cooperation with university based training programs. This theme is today embodied in the fact that the WBRC has formal ties with six universities. Support for this early research was provided by funding from Prosthetics Research Service which provided funds for two investigators, one in mobility and one in reading machines, and for necessary equipment. In the mid-eighties these funds were transferred out of the WBRC, to support Congressionally mandated research on Agent Orange. With the support of the Medical Center, the WBRC was able to utilize clinical funds to continue the research positions, but research equipment money was lost.

The current WBRC research focus in O&M began in 1991 when Ms. McKinley and Dr. Greg Goodrich, in cooperation with the O&M Department, began an evaluation of the Sonic Pathfinder mobility aid. The Sonic Pathfinder, developed by Dr. Tony Heyes of the Royal Guide Dogs Associations of Australia, is a mobility aid which uses ultrasound to sense the environment. Artificial intelligence is used to present an effective auditory pattern to the user. A four day instructor training program was arranged and Ms. Gayle Clarke (Senior O&M Instructor) and Dr. Heyes came from Australia to provide training for the investigators and six members of the O&M Department. The evaluation is nearing completion, and results to date are very favorable towards this new electronic travel aid.

## Low Vision Research

No aspect of WBRC research is more widely known than that of low vision. At the time May began work in this area little was known about rehabilitating partially sighted individuals. In fact, the notion that people who had lost so much vision could be rehabilitated beyond the use of Braille and a long cane was an arguable position. To help fill this void, and determine what benefits vision rehabilitation might have, May, with Gene Apple, began an extensive literature search; a search often using personal funds since no VA funds were available. It is worthy of note that even after leaving the VA, May continued her efforts that culminated in the 1978 publication of *Low Vision Literature Pertaining to Education and Rehabilitation: A Keyword Index* (New York: American Foundation for the Blind). This keyword indexed publication was the first comprehensive bibliography of the low vision literature. In addition, it served to demonstrate the importance of a multidisciplinary approach to vision rehabilitation by linking publications from such diverse fields as ophthalmology, optometry, special education, psychology, orientation and mobility, gerontology, neurology, counseling and others to the single focus of low vision.

The year of 1970 was a benchmark both for the Center and the newly emerging low vision field. In this one year a variety of mechanisms, including a monograph, a conference, and very practical research were used to promote an understanding of low vision. In 1970 Apple and May published the classic monograph *Distance vision and perceptual training: A concept for use in the mobility training for low vision clients* (New York: American Foundation for the Blind), which formed the conceptual basis for developing the Center's low vision program. In November 1970, May and Apple held the first national conference on low vision in San Francisco that included such notable figures as Father Carroll and Dr. Richard Hoover, as well as orientation and mobility specialists, optometrists, ophthalmologists, special educators, vision scientists, and representatives of other relevant disciplines. A major product of this conference

was the development of a set of research topics that, in the years to come, became an agenda for the low vision community.

In 1971 Apple and May founded *Low Vision Abstracts,* which was a forum and focus for low vision research and education. Its encouragement of university student publications led many special education and rehabilitation students into careers in low vision. In 1979 the *Abstracts*, then edited and published by Greg Goodrich, Ph.D., had a subscription list of some 200, however financial pressures forced its demise.

During May's tenure in research (from 1970 through 1972) a solid foundation was laid for future WBRC research. The early research projects included a paper and pencil method of evaluating patient's subjective perceptions of their visual fields, development of a detailed data collection sheet on patient's perception of visual functioning, and interviews with patient's concerning visual anomalies (including phosphenes, floaters, visual extinction, color vision, and visual memory) and correlation of these with patient visual functioning in various tasks.

Overlapping with these efforts was research on the newly emergent technology of image amplification that was pioneered by IT&T for the military. It was first applied to the mobility problems of individuals with night blindness by Dr. Elliot Berson. At the WBRC, Tom Coursey, from the O&M department and Dave McGowan (who for a brief time held the WBRC research position) headed the patient evaluation effort that demonstrated that this new technology held benefit for patients with retinitis pigmentosa and other causes of night blindness.

Closed circuit television (CCTV) technology, as a means of improving the reading abilities of partially sighted individuals, became available in the early seventies. This technology, however, was expensive to manufacture and represented a substantial risk to companies contemplating their production. Potential manufacturers needed demonstration of the value of CCTVs for partially sighted individuals, and a potential market. The WBRC, guided by Edwin Mehr, O.D. and Gene Apple, provided both by purchasing an initial order of 25 CCTVs and conducting a clinical evaluation.

Gene Apple's vision of WBRC research included hiring Ph.D. level investigators, and to accomplish this he transferred a position to Psychology Service. Psychology Service was headed by Hal Dickman, Ph.D. and both he and Doug Smith, Ph.D., (Assistant Chief, Menlo Park) supported this decision, and a research psychologist continues to be assigned to the WBRC. Don Fontenot, Ph.D. held the position for a short time. In 1974 Gregory L. Goodrich, Ph.D., a recent graduate of the sensory/perceptual psychology program at Washington State University, was hired. His initial assignment was to work with Dr. Edwin B. Mehr and the Visual Skills staff on evaluations of closed circuit televisions. An educational component was also part of his job duties and in 1974 he began the first low vision course for interns at the WBRC. The course was later taken over by Robert "Dee" Quillman, and is now taught by Hector Copado. From 1974 through 1979 he was an Adjunct Clinical Professor at Western Michigan University. In 1979 he was appointed a member of the clinical faculty of the School of Optometry, University of California, Berkeley.

Among the more notable studies that started in 1974 was one on practice and training effects in using closed circuit televisions and optical aids, and a follow-up study of closed circuit televisions that demonstrated a very high continued use rate by legally blind veterans after their discharge. This nationwide study was conducted with Ms. Nancy Darling who joined the research staff in 1976 and Dr. Mehr. These studies were notable in that they focused international attention on the usefulness of closed circuit television technology in vision rehabilitation. Dr. Mehr was very interested in research and education. He participated in virtually all low vision research projects until his retirement in 1972, and he, with Alan Freid,

O.D., published the first comprehensive text on low vision in 1973. His extensive knowledge of low vision greatly contributed to both the Center's clinical expertise and research.

In 1975 Drs. Goodrich and Judith Holcomb (then a student at the School of Optometry, University of California, Berkeley) conducted a pioneering study demonstrating that patients with central scotomas could be taught to use, and benefit from, eccentric viewing techniques. This training program became part of the visual skills department's standard training program through the efforts of Dee Quillman and his staff.

Late in the 1970's Quillman and Drs. Goodrich and Mehr began the first study of the application of the Frostig Figure-Ground test to low vision. This was a notable study in that it spurred a continuing series of projects examining visual perception in partially sighted adults. Included in this series are cooperative efforts with Dr. Olga Overbury from Concordia University in Montreal, Canada. Dr. Overbury completed her post doctoral study at the WBRC from 1985 to 1986, and has pursued an extremely successful career in low vision research. Dr. Overbury, and investigators at the WBRC, continue to conduct cooperative research projects.

Ms. Diane Morrissette joined the research staff in 1979, concentrating on mobility research. Among her many contributions were exhaustive studies of night vision aids including the Wide Angle Mobility Light (WAML) and continuations of the studies of night viewing aids started by Tom Coursey and Dave McGowan. It should be noted that the WAML was developed by Dr. Michael Marmor, a VA and Stanford ophthalmologist, and Carroll Ault, the WBRC's social worker from 1968 to 1988. Morrissette also conducted a follow-up study of veteran's use of the Mowat Sensor. In 1982 she received her doctorate from the Institute for the Advanced Study of Human Sexuality. Her dissertation was on the effects of diabetes and blindness on female sexual response.

A landmark research effort within the VA occurred in 1985. At that time the VA's Geriatric Research, Education and Clinical Center (GRECC) announced that proposals were being sought throughout the system to establish a demonstration program to specialize in work with older, visually impaired veterans. Dr. Goodrich, Mr. Joe Hennessey, and Dr. Steve Shindell collaborated with researchers from the Palo Alto GRECC to write a proposal for such a program. In 1986 the program was awarded to establish the Division of Vision and Aging (DVA), a jointly administered program to be funded by GRECC and housed within WBRC areas. The program, currently directed by Dr. Steve Lovett, provides outpatient services to severely visually impaired veterans age 60 and above. While DVA is a clinical program it also has a very active research component examining outcome predictors and assessment of treatment interventions.

Throughout the 1980's the area of low vision was a frequent target of research and educational activities. In 1984 and 1988 Dr. Goodrich, with Mrs. Eileen Hancock of the American Foundation for the Blind, organized two international low vision conferences to bring together leaders in the field for an exchange of knowledge in this rapidly growing field. In 1989 Dr. Goodrich collaborated with Drs. Paul Freeman and Randy Jose on a basic low vision textbook entitled *The Art and Practice of Low Vision* , which was published in 1991.

By the late 1980's publications in low vision had become so numerous that there was a need to develop a database of the literature. A database was begun by Dr. Overbury as part of her post doctoral study. It was subsequently expanded and converted to a computer database by Dr. Goodrich. In early 1989 Dr. Randy Jose (then at The Low Vision Center of Tulsa, Oklahoma) and Dr. Goodrich began a project to make this bibliography comprehensive and available for use by clinicians and researchers. Coburn Optical (Tulsa, Oklahoma) funded the original project and the database rapidly grew. In 1990 Coburn published the first edition, called *Low Vision - The Reference* , in both print and computer disk versions. A 1992 edition, containing over 4800 citations, will soon be published by the Lighthouse, Inc., New York.

In 1990 Quillman transferred from the Visual Skills Department to Research and began an extensive continuation study, with Drs. Mehr and Goodrich, of the Frostig Figure-Ground test. This study has yielded an enormous amount of information, in part confirming earlier studies, but also yielding new information on the power of perceptual testing in prescribing low vision aids and training.

**Reading Machine and Computer Access Research**

In 1972 Richard Bennett, a totally blind veteran, was hired to conduct research on reading machines for the blind. This was one of two new positions created by funding from Prosthetics Research Service. The first devices Bennett worked with were the Optacon, developed by TeleSensory Systems, Inc. and the Stereotoner developed by Mauch Laboratories. Both were examples of direct translation reading aids that allow reading by translating the printed shape of letters into a vibrating tactile image (Optacon) or auditory tonal pattern (Stereotoner). During the years he worked closely with Harvey Lauer (CBRC, Hines, Illinois) in developing evaluation and training procedures. Dick made many notable contributions to the development of reading aids. In particular, he is credited with the suggestion that the auditory display of the Stereotoner be made stereo rather than monaural. The latter suggestion earned Bennett a listing as co-inventor on the Stereotoner patent. In addition to his research duties, Bennett also trained many blinded veterans to read using the Stereotoner or Optacon.

Dr. Goodrich worked closely with Bennett on various projects including evaluations of voice output calculators and the intelligibility of synthetic speech. Stan Paul held a research position from 1978 to 1979 and collaborated on the synthetic speech research, as well as mobility research. In 1978 the first prototype of the Kurzweil Reading Machine (Kurzweil Computer Products) was delivered to the WBRC and Goodrich and Bennett collaborated on several studies of the prototype and its successors. One of their more notable contributions was the suggestion that an RS-232 output on the reading machine would allow it to interact with a computer. Such outputs are now standard features of reading machines.

Upon the untimely death of Richard Bennett in 1976, Ms. Sue Melrose joined the research staff. During her tenure at the WBRC several notable events occurred. These included evaluations of voice and Braille computer aids which were conducted and published by Ms. Melrose, as well as, an updated evaluation of calculators adapted for blind users. Ms. Melrose and Dr. Goodrich also began evaluations of the newly developed voice output computer aids. Initially these were simple voice output terminals, but they quickly improved, spurred on in large measure, by the personal computer revolution that began in Silicon Valley, an area that surrounds the WBRC. Within a few, very short years, veterans were being taught to use these voice and Braille output computers, as well as the Kurzweil Reading Machines, even though they had yet to be approved as prosthetic devices. This training continued under the auspices of the WBRC's and Sensory Aids Foundation's ETCETERA (Electronic TeleCommunications, Education, Training, Evaluation and Research Activity). This program grew from the needs of blind and visually impaired individuals for training on accessible computers.

In 1981 Ms. Melrose, Mr. Hennessey and Dr. Goodrich, in cooperation with Jerry Kuns and other staff of the Palo Alto based Sensory Aids Foundation, established C-TEC (Computer Training and Evaluation Center), a direct descendant of ETCETERA, and which was among the earliest, if not the first, comprehensive training program designed to teach computer access to blind and visually impaired individuals. Housed at the WBRC, C-TEC was funded by a three year grant to Sensory Aids Foundation. Upon completion of the grant C-TEC moved to the Sensory Aids Foundation where it remains an eminently successful program. The WBRC also continued its computer research and training program, which over time, became more a clinical

program than a research project. A more detailed account of these developments is contained in the chapter on computer training.

One of the individuals hired by C-TEC was Ms. Jan McKinley. In 1984 she joined the WBRC research staff to fill the vacancy left by Dr. Morrissette's departure. Her initial focus was on computer-related research, but her talents and interests soon had her branching out into other areas. Ms. McKinley has completed many product evaluations and collaborated on a national survey of blind persons to assess the status of technology and to identify unmet needs. She also collaborated on a project to use the DECtalk speech synthesizer to administer computerized psychological tests.

In 1985 Cathy Mack was hired to replace Ms. Melrose. Until her departure in 1985, Mack worked extensively with the C-TEC project. Tim Mayer was hired, in 1986, to replace her, and he and Ms. McKinley conducted extensive equipment evaluations. He also worked closely with manufacturers and programmers to improve the human factors of equipment and software design. Tim was adept at assembling low cost computer systems; a trait greatly appreciated by many veterans who attended the WBRC in the days before computer access systems were issued as prosthetic devices. One of Tim's outstanding attributes was his passion for information dissemination. He compiled, and freely distributed, computer resource lists and collaborated on articles describing accessible computer systems. Tim's wit, warmth, cheerful disposition, and willingness to share his knowledge has been sorely missed since he passed away in 1990.

## Collaborative Activities

Since 1978 the WBRC has collaborated with the Rehabilitation Research and Development Center located at the Palo Alto VA on a variety of technology related projects. A frequent collaborator from the RR&D Center has been Dave Jaffe, who's knowledge of computers has substantially contributed to a variety of projects including the early ETCETERA program, work on a voice output computer for administering psychological tests, and others. Dr. Richard Steele was also a frequent collaborator who headed projects to assess the needs of visually impaired individuals for computer access and to develop improved means of accessing computers. Most recently Gayle Curtis and Dr. Eric Sabelman, of the RR&D Center, have been working with investigators from the WBRC on a pilot research project to examine the feasibility of creating sound guides and "smart" environments to aid disabled travelers in orientation to and mobility within their surroundings. While the collaborative relationship with the RR&D Center has been our most active, the WBRC research team has enjoyed many other collaborations including those with Dr. Ian Bailey of the School of Optometry, University of California, Berkeley; researchers at Smith-Kettlewell Eye Research Foundation, San Francisco; Sensory Access Foundation, Palo Alto; Rehabilitation Research and Development Center, VA Medical Center, Atlanta, Georgia; Dr. Tony Heyes and Ms. Gayle Clarke of Royal Guide Dogs Associations of Australia; and Drs. Randy Jose and Larry Spitzberg of the College of Optometry, University of Houston

## Current Research Staff and the Future

Following Quillman's departure in 1990, to join the staff of the Southeastern Blind Rehabilitation Center in Birmingham, Alabama, Dr. Gene Apple returned to the WBRC. There is a symmetry to Dr. Apple's return. As the WBRC's first Chief he was responsible for the active development of the Center's research program, and it is fitting that he returns to help guide it as the Center begins its second 25 years. Dr. Apple's doctorate is in business and marketing and these skills bring new dimensions to the WBRC's research program.

The current research staff consists of Drs. Goodrich and Apple and Ms. Jan McKinley. Ms. McKinley's projects include evaluations of computer access products, computerized reading systems, electronic magnifiers, and electronic mobility aids. She is also conducting a study on

the use of color with closed circuit television systems. Ms. McKinley and Dr. Goodrich are collaborating with staff from the RR&D Center on a proposal (The Responsive Environment Project) submitted to Rehabilitation Research and Development Service to explore visual and auditory environmental orientation and mobility systems. While this project specifically addresses the needs of visually impaired individuals the concept has application for other elderly and disabled groups including deaf, cognitively impaired, and mobility limited individuals.

Dr. Apple has conducted surveys of the needs of blinded veterans, spearheaded the development of a WBRC Research Advisory Committee, and is developing an assessment tool for the newly formed Independent Living Program. In addition, he is taking the lead in helping Charles P. Vasile and the O&M department document their low vision training program in the form of a comprehensive text designed to be both a teaching tool for O&M university and internship programs, and a reference for O&M instructors working with partially sighted clients.

Dr. Goodrich was honored for his low vision research in 1991 as the first Non-Clinical Diplomat of the Low Vision Section of the American Academy of Optometry. He continues to be actively engaged in a variety of low vision projects including continued development of *Low Vision - The Reference* , clinical trials of the Johns Hopkins Willmer Eye Institute Low Vision Enhancement System (funded by the VA), and of a new generation of ergonomic low vision magnifiers developed by Dr. Larry Spitzburg of Houston, Texas (funded by the National Eye Institute). His low vision perceptual studies continue and he is currently working on a proposal to examine near vision (reading) training materials for use in clinic and private practice settings. He has also undertaken a project, funded by the Blinded American Veterans Foundation, to study tactile information displays. In the summer of 1992 he began a collaborative project with the Center's Visual Skills Department and Drs. Manfred Mackeven and August Collenbrander, both of the Smith-Kettlewell Eye Research Foundation, to develop a new technique for measuring visual fields in patients with central scotomas. Also in the summer of 1992 he received funding from the Palo Alto Institute for Research and Education to expand his work on estimating the visually impaired veteran population to include other disabilities.

If the past 25 years are an indication, research at the WBRC will become increasingly more active. Research efforts have already produced improved teaching strategies and technology that is applied in visual skills, computer access training, and mobility. Demographic and utilization information developed by the research program has also be important administratively as tools for planning for the service needs of Blind Rehabilitation Service through the coming decade. These accomplishments, and the accomplishments yet to come, derive directly from the philosophy of the research program that has existed since its beginning in 1969: Research is an integral part of the WBRC's rehabilitative function and serves an integral role in the rehabilitation program.

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Marianne (May) Apple provided a great deal of information, regarding the earliest days of research at the WBRC, for this chapter . Her efforts in providing this material is very much appreciated, as are her efforts in establishing the research program.

# CHAPTER 8.
# Nursing and Ophthalmology

Marilyn Kazemi
Head Nurse

## NURSING CARE AT THE WBRC

The intensity of nursing care has changed since the Western Blind Rehabilitation Center (WBRC) opened 20 beds at the Menlo Park Division (MPD) in 1967. These changes were necessitated by an increased WBRC bed capacity and by the fact that WBRC is providing rehabilitation services to an increasingly elderly population of veterans. The WBRC has been a 30-32 bed residential program since 1977 when it moved into a larger building at the Palo Alto Division. To adequately meet the health needs of the student population, the current nursing staff is composed of one RN Head Nurse, an intermittent RN, and six LVNs. Clients at WBRC are referred to as students rather than patients. They are viewed as being in the role of well persons, rather than ill patients, and their purpose for being at WBRC is for blind rehabilitation.

From 1967 when the Blind Center opened till January 1980 coverage was provided by health technicians on the day and evening shift and by college students during the night shift. All were trained in blindness and medical emergencies, so that they could give assistance to the student population as needed. The staff was small with only three full-time and two part-time technicians, assisted by mobility staff on the evening shift. An M.D., Dr. Clement Kansara saw new and ill students in the Outpatient Clinic (OPC). The technicians were responsible for students' safety and to get the appropriate person in cases of emergencies. They utilized RNs when medical problems arose. The RNs were assigned to the OPC - ambulatory care at MPD. They provided basic medical support by seeing students who were ill and triaging them to appropriate medical services when needed. The RN showed WBRC technicians how to do procedures like changing dressings, testing for sugar in urine, and giving oral medications. RNs were utilized to give all injections. In 1967, one of the first RNs to cover the WBRC was Ruth Ishizaki, currently Head nurse of OPC in MPD. Other RNs covering the WBRC were Lucille Hathaway, Barbara Murphy (now retired), and Rosemary Daughterman.

Technicians were also responsible for taking students to appointments off the hospital grounds and to recreational programs and outings. They assisted in the Dining Room and walked with patients to reinforce cane skills. During this time, technicians were able to dispense oral medications for blind students who were not yet independent in taking their medications, and they taught students how to give themselves their own medications. Medical Technicians' educational levels ranged from 2-year AA degrees to 4-year BS degrees. Direct supervision of medical technicians was provided by Orientation and Mobility supervisors.

Two of the health technicians were hospital corpsmen in Vietnam, Chuck Pullen and Charles Hamond. Chuck Pullen, who continues to work in nursing at WBRC, was in charge of the evening shift. Charles P. Vasille, now head of O & M, worked the night shift with another technician while he studied for his college degrees.

When the blind center opened as a 20-bed facility, the student population was composed of fairly young men, in their 20s, of whom the majority had lost their vision as a result of trauma while in Vietnam. Most had complete vision loss but in other ways they were usually in overall good physical health and stayed well during their rehabilitation program.

Some of the veterans, although physically healthy were multiply impaired with memory problems and learning difficulties due to the trauma they suffered in Vietnam. Overall, they were a younger and more active and feistier group than our current student population and this promoted some issues that were not health related, such as drinking and rebelling. Health technicians were active in resolving these problems which many times occurred after normal duty hours.

In 1977 the WBRC moved to a new building on the Palo Alto Campus of the VA. The student-patient census increased to 30. An organizational change took place. An RN was hired to oversee the health care of the students at the Blind Center. Nancy Peterson, the first RN, drafted and implemented nursing goals and guidelines for the new nursing department. Shortly thereafter the first LVN, Lana Lane, was hired, and the nursing department remained at this capacity until 1980. A part-time MD, Dr. Masako Baba was hired, and from that time sick call, admission physicals, and medical follow-up took place at the Blind Center, rather than in OPC.

Between 1977 and 1980 the use of health technicians was phased out and the positions were replaced by an additional 4.6 Licensed Vocational Nurses (LVNs). This change was necessitated by the fact that the blind student population was getting older, were less physically fit, and therefore in need of more professional support. One of the health technicians, Chuck Pullen successfully challenged LVN boards and has remained in the nursing department of the WBRC. Following the organizational change to professional staff, direct nursing care for a range of medical-surgical problems could now be administered within the Blind Center. Nursing became accountable to assess students' health needs, take corrective action as needed and educate the veteran student with regard to individual health needs.

In 1981 Dorothy Johnston, RN became the Head Nurse of the WBRC and when she retired in 1986 Karen Brown, RN filled this position. In 1988 Karen returned to school for her Masters Degree and this position was filled by the current Head Nurse Marilyn Kazemi, RN. Presently, more than half the students in the blind rehabilitation program are 50 years of age or older and have ongoing health problems. Thirty-five percent are diabetics who are coping with other major health problems this disease promotes. Nursing staff are actively involved in management of student health problems and communicate these problems to the Ward Physician, Dr. Carlos Camargo, who has been the attending part-time ward physician since 1981. Nursing staff also inform Blind Rehabilitation Specialists of all health problems which might interfere with the student's rehabilitation program, and are consultants, as needed, to assess student's physical limitations.

From the opening of the Blind Center to the present time, the WBRC nursing staff has continued to have as their major objective helping the blind rehabilitation student adjust to and manage sight loss, and other major health problems. Nursing is a support service that focuses on keeping students well, both physically and emotionally, so that they may gain the maximum benefit from their rehabilitation programs. When illness occurs during a student's rehabilitation program, they are assessed by nursing and triaged, as necessary, to the ward physician, or the Medical Center's emergency room.

## OPHTHALMOLOGY AT THE WBRC

Following the opening of the WBRC in 1967, ophthalmology services were provided by VA ophthalmologists who held clinics in ambulatory care twice a week. These doctors included Dr. Robert Little from 1967 to 1972 and Dr. Edgar Snow, also a neuro-psychiatrist, from 1972 to 1976. All low vision and blind patients were examined, diagnosed, and treated in response to their needs. When emergencies occurred students were taken to the eye clinic or the emergency room at the Palo Alto VA.

From 1975 to 1977, Ophthalmology coverage was provided by the OutPatient Eye Clinic and the Emergency Room at the Palo Alto Division. In 1976 Dr. Ralph Rosenthal who headed the Department of Ophthalmology at Stanford, became interested in augmenting his residents training program, by utilizing the WBRC. Dr. Rosenthal, and Ken Wiley, then chief of the WBRC, developed a program for a staff ophthalmologist to cover clinics within the physical structure of the Blind Center and this plan became operational in 1977 after the WBRC moved to its new location on the Palo Alto VA campus.

In 1978 Michael Gaynon, M.D. became the primary ophthalmologist to cover the Blind Center, a position he held until 1985 when Joseph Eliason, M.D. filled this position. Coverage since 1990 has been successively provided by Christine Austin, MD, Ed Levin, MD, Lisa Kelly, M.D., and (currently) Harry Banoff, M.D. These ophthalmologists routinely see new patients in the WBRC clinic, while treatment follow-up exams and emergencies are referred to the eye clinic located in the Medical Center's OPC.

# CHAPTER 9.
# Division of Vision and Aging (DVA)

Steve Lovett, Ph.D.
Director
Division of Vision and Aging

## BACKGROUND

The Division of Vision and Aging is a clinical research program administered by the Geriatric Research Education and Clinical Center (GRECC) in collaboration with the Western Blind Rehabilitation Center (WBRC) and the Audiology/Speech Pathology Service of the VA Medical Center in Palo Alto, California. The mission of the program is to develop and evaluate low vision rehabilitation programs for older veterans who are unable to utilize the services of the Blind Rehabilitation Centers or Clinics. It is currently the only program of its kind within the VA system.

In 1986, the Department of Veterans Affairs requested proposals for a permanent GRECC enhancement program to investigate the effects of permanent sight loss on older veterans and develop innovative strategies for providing these veterans with vision rehabilitation. The proposal submitted by the Palo Alto VA Medical Center was developed by representatives of three services: GRECC, WBRC, and Audiology/Speech Pathology. The representatives from each service who contributed a substantial amount of time and energy to the development of the proposal included:

**WBRC:** Joseph Hennessey, M.S. (Director); Gregory Goodrich, Ph.D.; Dee Quillman, M.S.; Steve Shindell, Ph.D.

**GRECC:** Gerald Reaven, M.D. (Director); Dolores Gallagher-Thompson, Ph.D.; Larry Thompson, Ph.D.; Antonette Zeiss, Ph.D.

**Audiology / Speech Pathology:** Arlene Kasprisan, Ph.D. (Chief)

The proposal set two priorities for the new program. The program would focus on veterans who were unable to use the services offered by the Blind Rehabilitation Centers and Clinics and it would develop treatment modalities that would compliment, rather than duplicate, the long term inpatient programs characteristic of the Centers and Clinics. Department of Veterans Affairs Central Office awarded the enhancement program to the Palo Alto VA GRECC, and the Division of Vision and Aging (DVA) was established in 1987.

The DVA is located in the Western Blind Rehabilitation Center. It has seven full time staff including: the program coordinator (Steven Lovett, Ph.D.), three vision rehabilitation specialists (Scott Johnson, M.A.; Howard Lauren, M.A.; and Elaine Yamasaki, B.S., O.T.R.); a clinical psychologist (Jon Rose, Ph.D.); an audiologist (Deborah McMenamin, M.S.); and a program assistant (Agnes Young, B.S., LPN).

### Outpatient Low Vision Rehabilitation Program

In keeping with its mission, the first program developed by the DVA was an outpatient low vision rehabilitation program for older, severely visually impaired veterans. Several features of this program are worthy of note. Evaluation and training of veterans in their home were made

central components of the program. This greatly enhanced the staff's ability to set specific rehabilitation goals and insure that veterans were able to function in the environment in which they lived. The vision rehabilitation staff decided that it would be more effective and efficient to have all of a veteran's rehabilitation training provided by one instructor. Consequently, all DVA vision rehabilitation specialists are now cross-trained in visual skills, living skills and orientation and mobility. Special or complex needs sometimes require that a veteran work with more than one instructor.

The availability of a clinical psychologist and audiologist have made it possible to work with veterans with substantial psychiatric, cognitive or hearing impairments. Complete psychological and audiological evaluations can be obtained and the potential effects on vision rehabilitation of any impairments found can be identified. Through DVA, older veterans with low vision who also need audiological and psychological services can receive these in one program rather than having to attend several different clinics at the medical center.

**Inter-Service Consulting Program**

The DVA began receiving referrals for veterans residing in long-term care units at the medical center almost as soon as the program began operating. Over time, the DVA has developed a program for providing low vision services to psychiatric, nursing home, and dementia wards. The program includes work with both the low vision veteran and the staff with whom the veteran must interact. The DVA staff members are able to respond quickly to requests for evaluation and consultation from other medical center units who admit a veteran with low vision.

**Short-term Inpatient Program**

Some veterans who would like to use DVA services live too far away to receive multiple home visits. These individuals can sometimes be admitted as an inpatient for approximately one week to complete the vision examinations and begin rehabilitation. Telephone contacts can then be used to provide efficient follow-up services. The short-term inpatient program is run in cooperation with the Western Blind Rehabilitation Center and the Geriatric Evaluation and Management Unit.

**Program Evaluation and Research**

Evaluating the effectiveness of the clinical programs, and conducting other research useful in identifying services needed by older, visually impaired veterans, are primary missions of DVA. Research done at the DVA has been published in the Journal of Vision Rehabilitation and presented at the AER International conferences and the national conference of the Gerontological Society of America. Research funding has been obtained from the VA Health Services Research and Development Far West Region.

# CHAPTER 10.
# Computer and Reading Aid Training

Janice L. McKinley
Blind Rehabilitation Research
and
Sue Story
Chief, Computer Access Training
Section

## Background

The WBRC was a leader in providing research and computer related technology for visually impaired and blinded veterans throughout the early days of the development of reading technology. The dedication of many WBRC administrators, researchers, and instructors has culminated in a fully developed computer access program. This program responds to the obvious needs of veterans for computer related technology.

Two threads interweave throughout the history of computer related technology: 1) the development of technology to allow a blind person to directly read printed information, and 2) the use of personal computers to allow blind individuals to efficiently perform tasks ranging from writing letters to managing information.

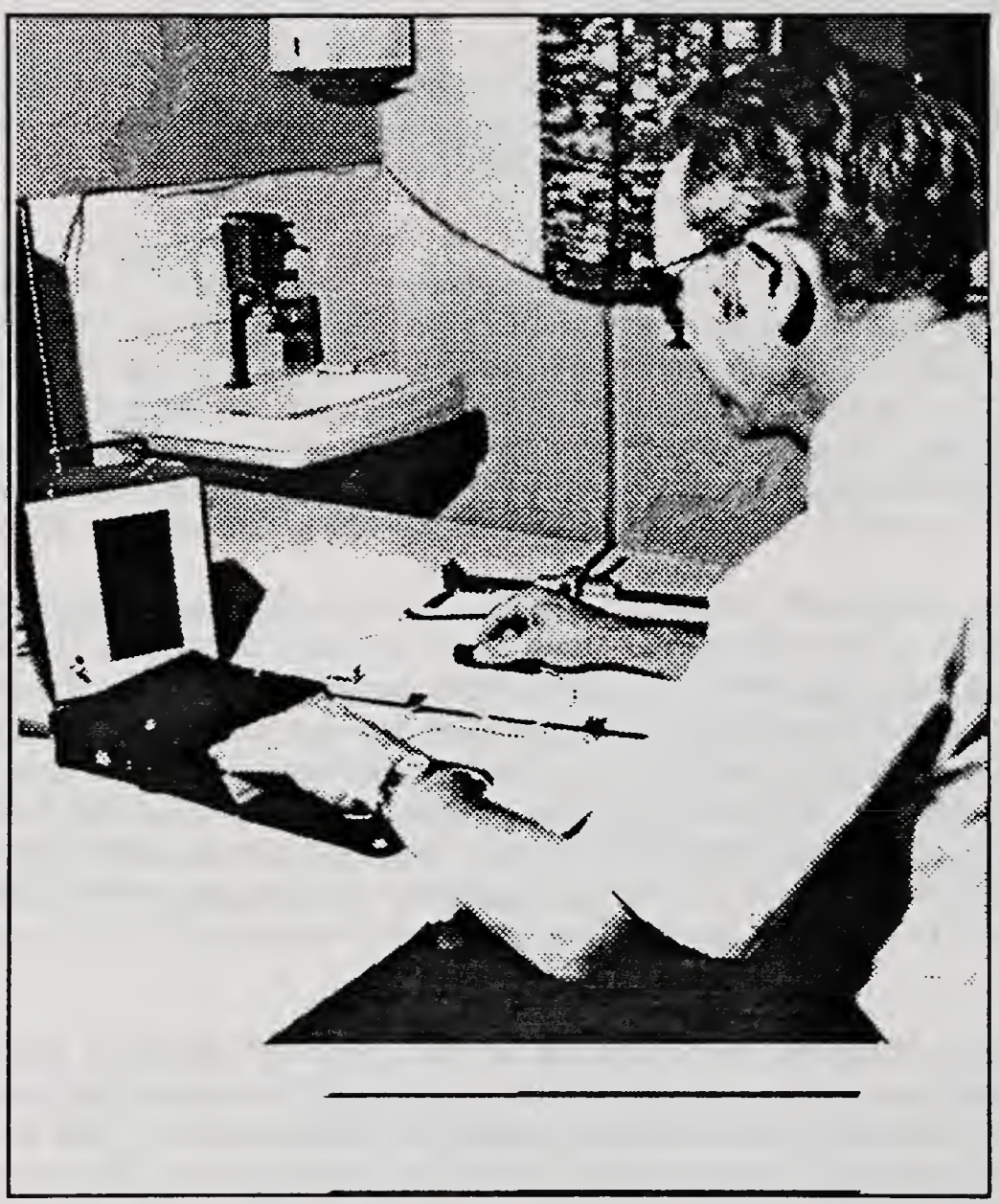
The VA Blind Rehabilitation Service supported the development of the original Kurzweil Reading Machine by purchasing a number of machines in 1978. Along with other researchers throughout the VA, Dick Bennett, a WBRC researcher, had worked with the Optacon and Visotoner which pre-dated optical character recognition based reading system. These two devices provided print access to blind persons using vibrating pins and tones to indicate the shape of letters. People were excited by the potential of the Kurzweil Reading Machine to translate printed documents directly into spoken information and "learn" to read a new type style.

As it evolved, the $50,000 Kurzweil Reading Machine that was contained in two large pieces changed to the size of a dishwasher and eventually came down in price to $19,500 and could read 60 percent of the material presented to it. Now the Kurzweil Personal Reader has evolved to a $12,000 device the size of a portable sewing machine that can read 90 percent of print material as a stand alone system. Various systems that can be integrated into a personal computer for approximately $4,000 have been developed by Arkenstone, Kurzweil, TeleSensory and others. Reading technology is still expensive, but certainly the trend is in the right direction. The operation of Kurzweil Reading Machines was originally taught to veterans by research staff. Jay Stiteley, as an instructor in the Living Skills Section, first taught veterans to use the Kurzweil Reading Machine in 1983.

In the early days (late 70s, early 80s) the Apple II personal computer was the choice of most developers working on computer access. There were special programs for large print, Braille, and speech which were written to accommodate visually impaired persons. The VersaBraille was "interfaced" with the Apple II computer to give the user Braille access. The early computer aficionados loved the Echo II speech synthesizer, which could be made to sing, although it took a practiced ear to understand the idiosyncrasies of its speech. State of the art technology has come a long way since then. Personal computers have evolved to IBM PC compatible 386 computers, computerized reading systems that can interpret most print with high accuracy, and innumerable access programs for controlling speech and large print displays.

## The Change: Integrating Computer Technology

At the WBRC, the exploration of computer related technology began in the research area. In the early days, Dick Bennett, Gregory Goodrich, and Sue Melrose were researchers who, in addition to other projects, evaluated technology such as the Kurzweil Reading Machine, the VersaBraille, and adapted computer equipment. In late 1981, the research staff at the WBRC found that several present and future research and evaluation projects required the purchase of Braille, voice and/or large print computer access aids. Concurrently, there was an increasing number of students at the center who needed computer access for their employment or education. When the research projects were completed, there was no formalized method of bringing the equipment and the knowledge gained from the research together with the students who needed exposure to it. Similar concerns were evident to the staff at Sensory Aids Foundation, now known as Sensory Access Foundation (SAF) who also realized that they had access equipment that had been purchased for temporary loan at job sites, but which could not be used once the loan period expired. Staff from both the WBRC and SAF saw value in creating a computer demonstration center. In such a center veteran and civilian blind and visually impaired persons, employers, rehabilitation and education professionals, and others could see this needed access technology. In addition, the center would allow demonstrations comparing different types of equipment and providing the opportunity for hands-on experience with these devices.



Dick Bennett reading with an Optacon.

While no funding was available for such a project, the staff of the two agencies continued to cooperate and in January of 1982 an agreement was signed to set up a center. It was agreed that the VA would provide space and the primary staff. The equipment would be contributed by both agencies. Follow-up job placement consultation would be provided by SAF staff. The project, called ETCETERA (Electronic TeleCommunications, Education, Training, Evaluation, and Research Activity) provided benefits to both agencies and their clients.

Within the next year and a half, experiences showed an increasing need to expand resources in order to provide funding and dedicated staff for the ETCETERA project. Training on the VersaBraille and the Kurzweil Reading Machines reached a level which required a full-time instructor at the WBRC for veteran students. Evaluations of technological based aids such as talking calculators, the talking Optacon, the Kurzweil Reading Machine, and computer access devices continued to be performed by WBRC research personnel.

Requests for demonstrations of the ETCETERA computer equipment to VA officials, community groups, employers, blind and visually impaired persons, and others increased at a surprising rate. An innovative proposal combining resources from the WBRC and SAF was submitted in 1983 to the Office of Education. In October the Office of Education awarded a grant to SAF for additional staff, equipment and operation of the demonstration and training center. The Computer Training and Evaluation Center (C-TEC) located at the WBRC was formed from the collaboration between the WBRC and SAF. Under the three year grant three employees were hired -- a project director, an administrative assistant, and an instructor to be located at WBRC. Consulting funds and moneys to purchase training equipment were also allocated. WBRC provided space and office overhead, two additional full-time staff, research staff as needed, and equipment for evaluation and research. Jay Stiteley, an instructor in the written communications and living skills section, was appointed to be the first full-time instructor (Computer Reading Aids Specialist) in 1983. Sue Melrose, a WBRC researcher, devoted full-time to the C-TEC project. Other participants were Greg Goodrich and Diane Morrissette, researchers at WBRC, and Jerry Kuns, and Jan McKinley who was hired through SAF.

During the first 18 months, 33 individuals (17 veterans) received training in the C-TEC program, 3 formal educational programs were attended by 38 professionals and consumers, 151 people attended demonstrations and informational programs, and 5 vocational and educational evaluations were completed. The C-TEC project was one of 7 similar projects nation wide. The usefulness of, and demand for, computer-related technology was dramatically demonstrated during the three years of this project.

The unusual collaboration of a small private agency and the VA through the WBRC, combining resources and developing the blossoming field of computer access technology, proved fruitful for both organizations. SAF eventually established its own computer training and evaluation program. WBRC gained an in depth understanding of the expertise and resources required to establish a Computer Access Training program. This expertise was used to design and provide a one week in-service on computer access equipment for all the other BRC's. A white paper was generated by the BRCs outlining the structure and requirements of a successful computer training program. After the C-TEC project ended, the WBRC through the support of Director Joe Hennessey continued to offer computer access training with one instructor and research support through Timothy Mayer and Jan McKinley, while developing and obtaining support for a formal computer training program.

In March of 1987, after Jay Stiteley left the VA, Lynn Gressley was hired as the new Computer Reading Aids Specialist. Recognizing that additional support was needed, Joe Hennessey once again restructured the staff in order to provide another position to the fledgling program. In November of 1987 Norine Krueger was hired to fill this second position. With the exception of Kurzweil Reading Machines and VersaBrailles, all other computer access equipment

provided by Prosthetics Service had to be purchased by the veteran's local station. Both Reading Aids Specialists became very adept at insuring that their one IBM Personal Computer, two Apples, and limited large print and speech access equipment continue to be in working order.

In 1989 the program inherited an old IBM AT computer from the departing Psychologist. This was the first computer the program had with a hard disk drive and the staff became very excited at the possibilities that were now available. During this time the emphasis of the program changed from the Apple IIe to the PC primarily because of new access programs being marketed allowing persons with a visual impairment to use the same software programs as their sighted peers.

In October 1991, the Computer Access Training Section at the WBRC was officially established with the creation of its own department. At this time, Sue Story was named as the Supervisor and Lynn Gressley and Norine Krueger continued as the Computer Reading Aids Specialists. These positions were soon to be renamed Computer Access Training Specialists (CATS). The Western Region allocated funds to establish the new program and funding was provided to complete the unfinished space of the second floor in B wing. This added two beds designated specifically for Computer Access Training participants, increasing the total WBRC bed space from 30 to 32 beds. Funding by the VA Western Region also provided for the three Computer Access Training Specialists, a Supervisor, furniture, and ADP (Automated Data Processing) equipment.

At the same time the Prosthetics Service of the Department of Veterans Affairs restructured the method by which money was allocated to the department's hospitals so that all of the money was centralized. Central Office became responsible for the approval of all computer access requests. Within the Western Region, the WBRC became responsible for both the training and the issuance of computer equipment. The WBRC was now able to provide training on the equipment that veterans would ultimately take home. To date, over 150 veterans have benefitted directly through computer training from this change in policy.

In January of 1992 Lynn and Norine were joined by a third instructor, Phyllis Jones. This brought the final staff count of the program up to 1 supervisor and 3 instructors. In July of 1992 Phyllis will have completed instruction with her first student, the space in B-Wing will have been completed, the supervisor, instructors and students will have been relocated into their permanent space and the Computer Access Training Section will finally have completed its transition from a good idea to a full fledged, fully operating program.

# CHAPTER 11.
# Independent Living Program

Phillip Lapekas
Blind Rehabilitation Specialist
and
Todd Turansky
Regional Consultant

## BACKGROUND

The Independent Living Program (ILP) is a live-in experience for the patient, facilitating a smooth transition from the rehabilitation environment to the home environment. The activity takes place in one of two private apartments, in the Western Blind Rehabilitation Center (WBRC). The patient travels out to do his/her own shopping and returns to do meal preparation, entertaining, bill paying, and record keeping for approximately one week. The ILP was designed to give insight into the strengths and challenges of the rehabilitation training program being experienced by the veterans. This relatively new function at the WBRC began as an idea in 1981, and was the brainchild of Joseph Hennessey, the WBRC Director. The ILP only began to take focus as a reality in 1986, when a second program, the Family Training Program was being considered. Both programs needed facility space, but at the time, the Family Training Program was being operated using rented motel space to house the participants. It was shown that a facility could be built to house both programs and significantly lighten the VA budget. The concept was accepted, and the second floor B-Wing was selected for this purpose. The development of the actual apartments for individualized Independent Living culminated in October 1989 with the completion of the new second-floor B-Wing. Each apartment included living, sleeping, cooking, bathing, and personal hygiene areas with the most modern of appliances to facilitate a realistic experience. The apartments were, however, taken out of service and loaned to the Medical Center for two years following the October 1989 Loma Prieta Earthquake. The apartments returned to service some two years later, and received their first student "tenant" on December 10, 1991.

## THE CHANGE

The ILP experience is currently outlined in fifteen scenarios of "real life" vignettes. As few, or as many, as necessary may be combined to produce the desired learning experience for the student. These scenarios include shopping, traveling, moving into the home scene, entertaining both at home and out in the community, job/volunteer applications, resume writing, and cooking and cleaning to name a few. Each scenario is broken down into sub-tasks; for example, in the moving-in scenario the tasks include setting up utilities, ordering phone service, and signing a lease.

This group of scenarios was developed by calling upon the entire staff to help develop them to be realistic. Activities were grouped so that the student's new skills would be displayed in a manner similar to his/her home community lifestyle. The program's coordinator, Phil Lapekas, introduced the first student, Ronald Schmidt, to the program on December 10, 1991. Ron picked one scenario of his own to complete and two scenarios were picked by the interdisciplinary team (composed of all of Ron's instructors, plus representatives of the center support team and administration).

The success of the program is directly related to the teamwork of the individual instructors and their interdisciplinary focus, as they teach new skills to the patient during the regular program. That focus is carried forward during the planning of the independent living experience.

## CONCLUSIONS

This program is expected to be an integral part of each student's rehabilitation experience, and as a culmination to his/her rehabilitation training. A recent addition to the staff, Dr. L. Eugene "Gene" Apple, was assigned to provide research consultation to the Independent Living Program. Data is gathered using instruments being designed by Dr. Apple and the Administration of WBRC. These instruments create an overview of the ILP, and give insight into the strengths and challenges of the rehabilitation training program. Their use allows each student who completes the ILP to "hand on" his/her experiences, through the database, to the staff and the next student in line.

# CHAPTER 12.
# Living Skills

Diane M. Ryan
Chief, Living Skills Section
and
Holly Stonerock Bliven
Intern Supervisor, Living Skills Section

## Changes Through the Times

Since its beginning in 1967, the WBRC Living Skills Section has provided students with individualized instruction and practical experiences, designed to restore independent functioning in personal and written communication, Braille, and activities of daily living. When the Western Blind Rehabilitation Center (WBRC) opened in Menlo Park as a twenty-bed rehabilitation center, the Living Skills Section consisted of five staff positions, with Ms. Joy I. Bailey as its chief. A graduate of Western Michigan University's Rehabilitation Teacher Training Program, Ms. Bailey worked at the VA's Central Blind Rehabilitation Center at Hines, Illinois before traveling west to California. Shortly after, Mr. Neil Schulman was transferred from Hines as the section's first braille instructor. In 1970, Mr. Schulman became the section's second chief, a position he held until 1979.

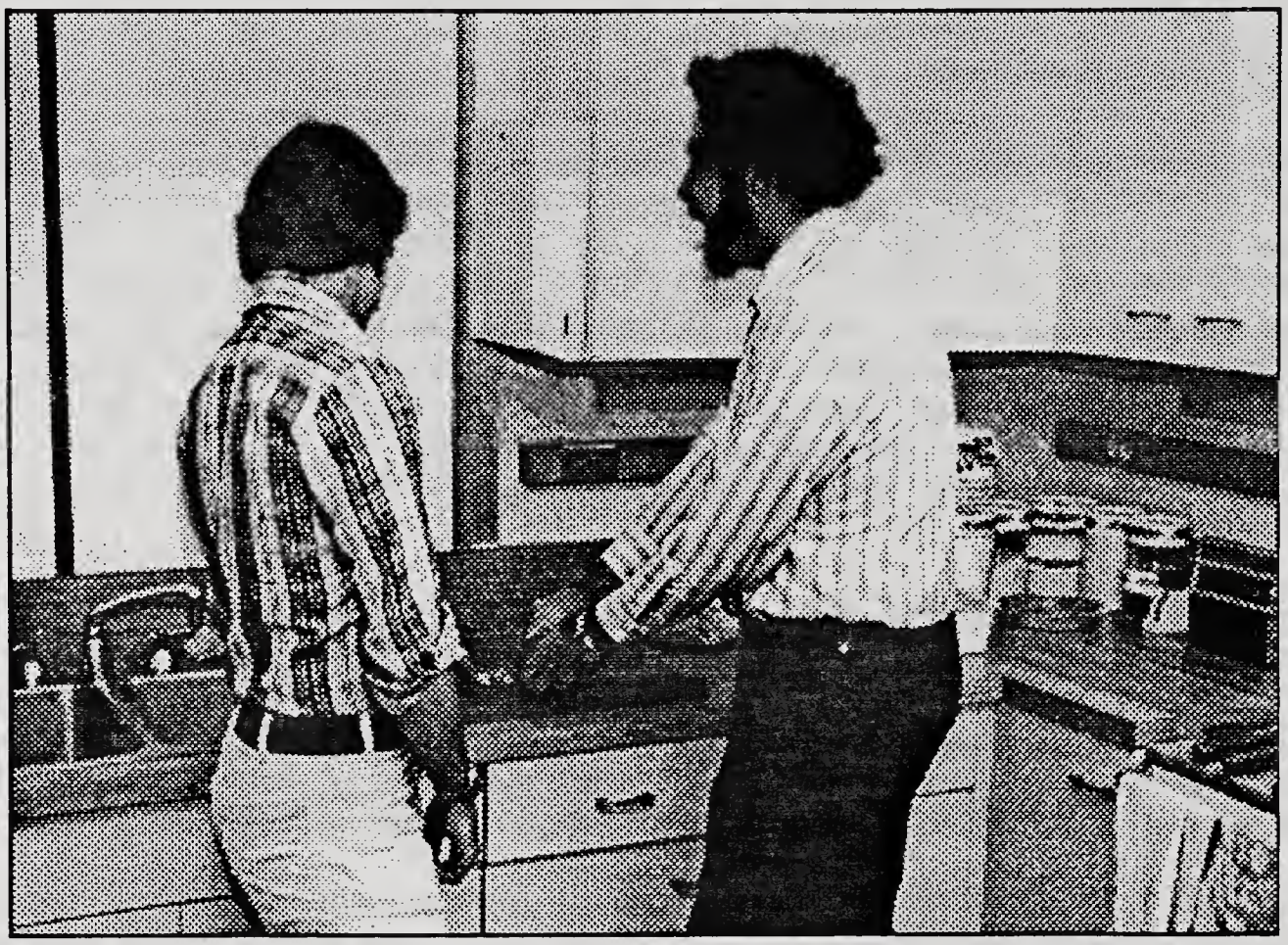
The intervening years have seen several staff changes within the Section. The following individuals served as Living Skills Section chiefs between 1979 and 1992: Mr. Doug Blanton, Mr. Al Caso, Ms. Lynn Stockebran (Tomlinson) and Ms. Sue Story. Diane Ryan is the current supervisor of the section. She is a certified rehabilitation teacher and has administered a similar program in a private rehabilitation center. Two current instructors, June Jenkins and Betty Sidlinger, personally account for well over thirty years of continuous service.

In its first year, the WBRC Living Skills curriculum separated braille and written communication courses from Adaptive Daily Living skills. One instructor had responsibility for teaching the full range of ADL skills to all students. The first was Liz Moiland, a registered Occupational Therapist. At that time, it was thought that vision was essential in order to teach typing. Hence, braille instruction became the domain of blind staff members, with typing courses being assigned only to sighted instructors.

As it became evident that both blind and sighted rehabilitation teachers could teach typing and all Adaptive Living Skills, vision was no longer viewed as a criteria for assigning students to specific teachers. Beginning in 1977, and for a period of time thereafter, each student was assigned to a single rehabilitation teacher who taught him or her all written communication and daily living skills lessons. This has evolved to today's practice of assigning students according to the availability of staff. It is not unusual for a current student to have up to three different instructors from the Living Skills Section: one for personal communication skills, another for braille instruction, and still another for daily living skills. This affords the opportunity for the student to be exposed to a variety of teaching strategies and philosophies.

In the late 1960's and early 70's, talking calculators, portable cassette recorders, microwave ovens and electronic typewriters were things of the future. Written communications instruction covered handwriting, manual typewriters, reel-to-reel tape recorders and use of the abacus.

In the early years of WBRC, all students were exposed to braille as a reading and writing medium. This was in keeping with the then widely accepted theory that all visually impaired persons should at least be exposed to its principles and know the formation of braille letters. For low vision students, flash cards with braille on one side and print on the reverse were used to teach braille versions of alphabet letters. These students also had experience reading braille tactually and using the Perkins Braille writer. Written communication skills training for low vision students lasted only one week. As a rule, low vision devices were not incorporated into this component of the Living Skills curriculum. One hour per week was devoted to teaching recreation and leisure activities. Popular table games of that time included Bingo, Monopoly, and Uno.



Doug Blanton (left) and Al Caso (right) demonstrating kitchen techniques.

Currently, students receive instruction in the use of electronic and "high tech" devices. Developments in synthesized speech have made "talking" watches, calculators and clocks readily available to the general public. Consequently, WBRC students master their use in living skills classes. Use of microwave ovens is taught along with standard electric ranges for meal preparation. All students who express an interest receive instruction in the use of electronic typewriters to meet personal communication needs. Braille reading and writing skills are taught to students whose vision does not allow access to either enlarged or magnified print for reading purposes.

**The Intern program**

The WBRC has traditionally been active in training future Rehabilitation Teachers, and over 50 interns have received training here. The opening of the WBRC in 1967 brought the birth of an internship program with Western Michigan University in Kalamazoo, Michigan.

While he was the Chief of the VA's Central Blind Rehabilitation Center (CBRC) in Hines, Illinois, Gene Apple was able to arrange a partnership between Western Michigan University and

his center, as a place for interns to complete their internship. This arrangement worked well for the University, as well as the CBRC, and their union remains strong even today. When the decision was made to open the new WBRC in Palo Alto, Gene Apple, as the director of the new center, saw this as an excellent opportunity to expand the locations for internship sites. Using the knowledge from the CBRC affiliation, he made the necessary arrangements. In 1974 an affiliation was signed with Western Michigan University for the placement of interns at the WBRC. The first group of interns arrived in 1976.

In 1987, a Rehabilitation Teaching Program was established at San Francisco State University, and in 1988 the first two interns from San Francisco State's Rehabilitation Teaching program began their internship at the WBRC. These two interns, Margie Donovan and Maeve Matzer, have been followed by others. Margie Donovan was hired by the WBRC in 1990 as a rehabilitation teacher and is still on staff. Maeve Matzer now works in Salem, Oregon, at the Commission for the Blind.

While changes within the VA's internship program have been seen throughout the years, the main purpose of the WBRC, as an internship site, has remained the same: to have a supportive setting for interns to apply the teaching skills and theories they've learned while in school, and to provide interns with a structured and constructive environment where they can learn and grow. As an intern site, the WBRC also has the responsibility of working with the universities, to develop well qualified, outstanding teachers who will benefit all with whom they work.

Since the beginning of the affiliation between the universities and the WBRC many low vision, totally blind, and fully sighted interns have gone through the WBRC on their way to becoming professionals in the field. These interns now work in private agencies, state agencies, and some in the VA system. Changes that have taken place over the years within the internship program have focused mainly on the management of the internship program and on the content of the internship program. For many years, the supervisor of the Living Skills department was responsible for handling the interns and their program. Later, the supervisor of the Living Skills department assigned a separate master teacher to each intern. This practice continued until 1985. In 1985 June Jenkins became the intern supervisor, and continued in this role until 1989. In 1989 she resigned from this position and the responsibility of the interns returned once again to the supervisor of the Living Skills department. The current intern supervisor, Holly Stonerock Bliven, was selected in 1991.

The content of the internship program, even in its earliest days, included exposure to all of the WBRC's training areas, however two areas, low vision and manual skills, have become major areas of specialized training for interns. A low vision course for interns was first offered by Greg Goodrich, Ph.D. in 1974. In 1977, as the low vision program matured, Robert "Dee" Quillman, then supervisor of the Low Vision Department, took over the course and expanded the training program for interns. The class was designed to give interns a better understanding of low vision, as well as, an understanding of how aids are used to improve vision. The class was conducted for two hours a day and generally lasted five to six weeks. It consisted of class lectures, experiments, and some practical work. The goal for the future is to draw the interns even more closely into the low vision area by providing them with the opportunity to do some basic testing and screening. In the area of Manual Skills, it was not until 1989 that both sighted and visually impaired interns were allowed to work in the area of Manual Skills. Prior to this time, only sighted interns had been allowed to experience part time teaching in this area.

Another goal is to provide interns with a better sense of what constitutes itinerant teaching. While many interns understand that there are two types of teaching jobs, center based and itinerant, it is difficult to get a sense of both types of teaching when most intern sites only offer one type of training. The two types of jobs are center based, where the student comes to the

center and receives training, and itinerant teaching, where the instructor goes out into the student's home and provides training there. In 1991, interns began itinerant teaching with the Division of Vision and Aging. The Division of Vision and Aging works with veterans who have a visual field of 40 degrees or less, a visual acuity in the best corrected eye of 20/70 or worse, or who have a physical or cognitive disability that is severe enough to prevent them from attending WBRC full time. Training for these patients is provided in their homes, and they are generally seen once a week. Training can be provided to them in the areas of visual skills, orientation and mobility, living skills, psychological counseling, and hearing aid orientation and aural rehabilitation. By allowing interns to accompany members of the DVA team, they are given a small sense of what itinerant teaching is, as well as the wide variety of services that are sometimes offered in the home setting.

The internship program is an important part of the WBRC. The opportunities to work with university faculty and students to help ensure that the field of blind rehabilitation is staffed with qualified and dedicated people provides a continuing source of professional pride for WBRC staff.

**Future Changes within the Living Skills Section**

The Living Skills Section strives to keep its curriculum and program emphasis in line with student's needs. As their needs change, so too, will the content and focus of our instructional program. The Living Skills staff anticipates several changes. First, as the average age of the general population increases, we will adapt daily schedules and teaching strategies to better serve an older student population. Second, as technology allows access to new and better aids and appliances, we will evaluate suitable aids and introduced them into the Living Skills curriculum. Finally, we will develop practicum teaching opportunities at the WBRC for San Francisco State University students, and develop intern programs with other universities.

# CHAPTER 13.
# Recreation Therapy and WBRC Volunteers

Liz Borra
Recreation Therapist

## BACKGROUND

In October of 1983 the WBRC had its first, part-time Recreation Therapist. It is the mission of Recreation Therapy to provide therapeutic interventions by a qualified Recreation Therapist/Recreation Therapy Assistant, based upon a continuum of care, so as to improve independent funtioning within the least restrictive environment.

When the WBRC opened in 1967, the director and staff recognized the need to provide recreational activities to the veterans in order to promote a well-rounded rehabilitation program. They recognized recreation as being a part of everyone's life. The staff was young and energetic which helped motivate the students to actively participate in activities. Between 1967 and 1971 the Orientation and Mobility staff rotated to cover evenings, while other rehabilitation staff were assigned on rotation to provide the veterans with activities at other designated times. Beginning in 1971 Health Technicians provided evening coverage and weekend activities. The activities varied widely depending on the interests and training of the staff member coordinating the activity. There were many picnics, social outings, sight seeing and structured activities such as fishing, bowling, archery, swimming, skiing and golf. All combined to expose veterans to a wide variety of activities and opportunities to develop skills. The WBRC staff also escorted veterans to hospital wide programs such as dances, bingo and holiday events. They also utilized the on-station facilities such as the swimming pool, golf course and bowling alley, frequently working with Recreational Therapists such as Mickie Hoe who ran the golf program at the MPD and Corky Walker who worked with the blind golfers when the center moved to PAD.

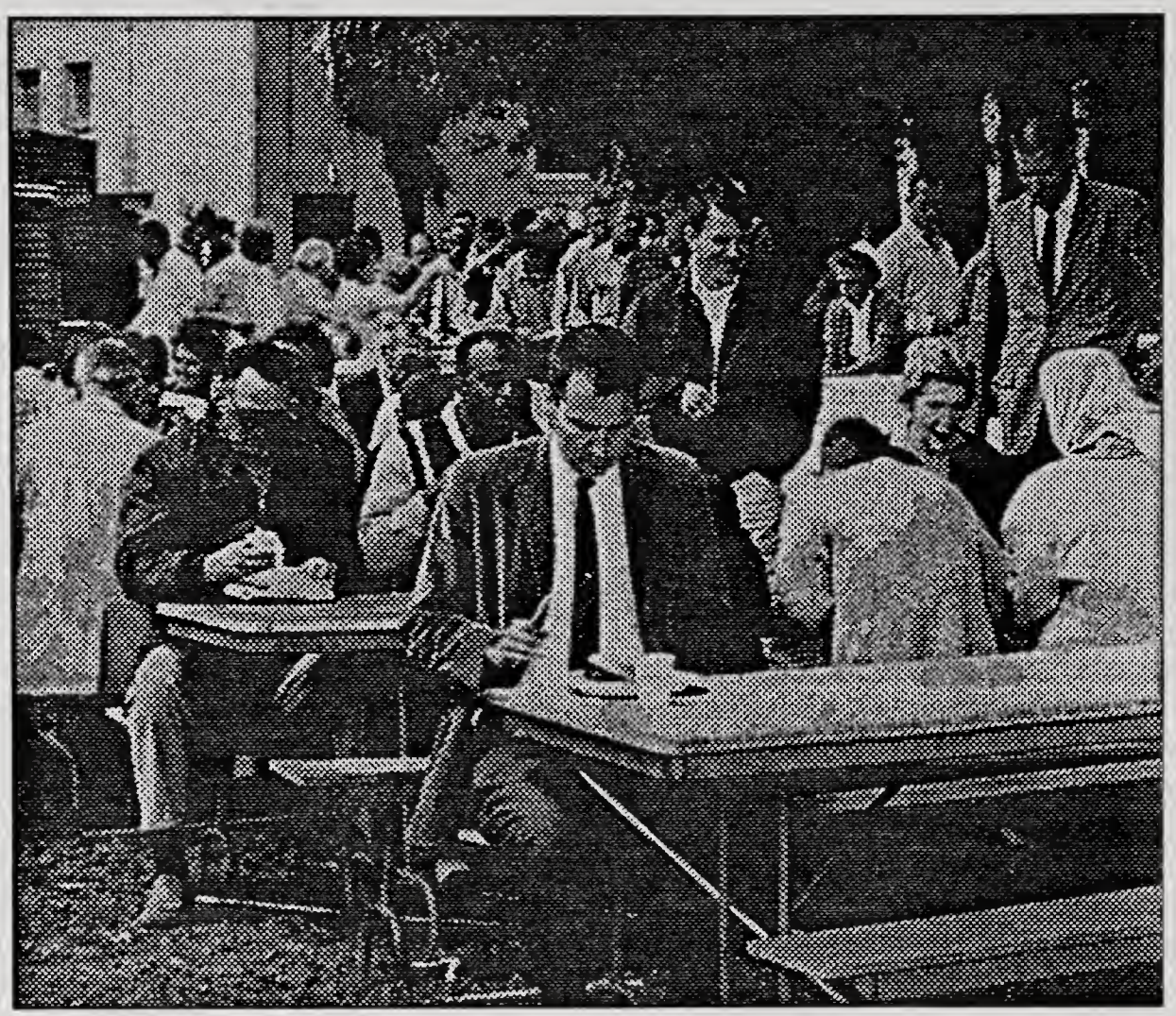
After 1975, with the change of directors, a committee was formed of rehabilitation staff interested in providing recreational activities for the veterans. This committee did not include the entire staff as was seen in previous years but staff were still rotated to cover activities. While these activities were provided to all students, the programing was done on a general basis and did not address veteran's individual needs. In the late 1970s the WBRC began to receive additional recreational support from Foothill College's adult education program which provided community outing on Saturdays and adaptive PE courses in swimming and fitness weekdays at the Center.

## THE CHANGE

In October of 1983 the WBRC received its first, part-time Recreation Therapy/Creative Arts Therapist, Jerry Duncan. Jerry was assigned to the WBRC for 20 hours a week to provide therapeutic intervention with the students and documentation of the program. Jerry's educational background was in music therapy. Many of his interventions reflected this background and he developed a wide variety of programs that used music as a catalyst for developing skills.

When Jerry first arrived he assisted with the existing Recreation Committee to get a feel for the population and their needs. By late 1984 Jerry began to take on more and more of the activities, and eventually the Recreation Committee dissolved. Recreational activities were, and still are, supported by rehabilitation staff when additional staff is needed. Jerry introduced programs that were focused more on the veterans' individual skills and needs. He started formal assessments of students to identify their individual recreational needs but, his part-time status,

imited how much he could accomplish. A leisure education and planning class was started which taught the students how to find resources and adapt activities to meet there needs. He began a music therapy program to develop auditory skills, accompanied students to local theaters, participated in the Ski For Light program in Dillan, Colorado, and in late 1984, started to attended a sailing program on the Bay called The Night Wind. The Night Wind was a sailboat owned by Mr. E.N. Kettenhofen and the program was coordinated by Sharon Boldt. Its goal was to provide blind people in the Bay Area with a monthly social outing on San Francisco Bay. On many occasions the WBRC would participate with another blind rehabilitation program from the Orientation Center For The Blind. Jerry also played an important role in coordinating volunteers and activities provided to the center.



An early WBRC picnic at the Menlo Park Division. Gene Apple, WBRC Chief is sitting down to eat in the forground. Also shown, standing at the extreme right of the picture is Jim Doyle, WBRC Assistant Chief.

In 1985, Jerry started an innovative program to address both the needs of the WBRC students and patients in the VA's Post Traumatic Stress Syndrome program. He coordinated a joint camping trip between the two groups. This trip proved to be very beneficial. Through Jerry's efforst and the positive response of the students, it became apparent to the WBRC staff that recreation therapy was an important educational component of rehabilitation. Not only did veterans benefit from having recreational opportunities, but their individual recreational needs were addressed. They were also given more specific information on resources and adaptive skills which applied directly to their lifestyle and community.

Between 1985 and 1987 there were several Recreation Therapists, including Shawn Hasson and Susan Fenner, who had part time assignments to the blind center and who continued many of the programs established by Jerry. It wasn't until 1987 that the WBRC had a full time Recreation Therapist, Kay Knott. Kay picked up where Jerry left off and re-established and refined the

Assessment process. She was able to more extensively meet the individual needs of the students through one-on-one leisure education intervention. During Kay's stay at the WBRC she helped establish the Ham Radio program through the Palo Alto Amateur Radio Association. Steve Stuntz and Walley Porter, two volunteer Amateur Radio operators who came twice a month to the WBRC, were very helpful in establishing the program. She relocated the bowling program to an off-station community bowling alley, after the bowling alley at Palo Alto VAMC was closed, and brought students to the VA National Winter Sports Clinic which started in 1986. Kay also trained several interns in Recreation Therapy, and compiled an extensive western region resource list for recreation opportunities for blind individuals.

In September of 1990, when Kay retired, Liz Borra transferred into the position. Liz's transition was smooth because she had completed her internship with Kay Knott in 1988, and had worked at the Special Care Center at the Palo Alto VAMC. Liz established a regular monthly fishing program, expanded communications with the Visual Impairment Service Team (VIST) coordinators at each hospital via FORUM (a computer network), and developed a more comprehensive discharge summary format to help with outpatient follow up and information to the VIST Coordinators. She is actively pulling more resources into the blind center and has many plans for future refinement and expansion of the program. She will be re-establishing the golf program that was lost after the earthquake in 1989. Liz is looking at other avenues for sailing, since the Night Wind was given away by its owner in September of 1991. She also took an active role in increasing the visibility of blind participants in the National Winter Sports Clinic, and helps instruct cross-country skiing at the clinic. Other projects that are in progress are an educational video tape "A Vision of Recreation", that demonstrates the unlimited possibilities of recreational participation by the blind, and the establishment of a cassette and video tape recreational library to promote the leisure development. Retirement planning for the increasingly older population seen at the WBRC is also a high priority.

Current activities at the WBRC include:

Adaptive games group
Fishing program
Monday Night Bowling program
Ham Radio group
Hospital wide Tuesday Night dances
Hospital wide Thursday Night Bingo
Golden Gals social/dance
Night at the Theater
Foothill Fitness and swimming programs
Foothill Saturday Community Outing
Wide variety of special events
One on one educational programs.

## CONCLUSION

In the years to come it is apparent that Recreation Therapy will play an increasingly important role for the blind and visually impaired veteran. Because the majority of blind veterans are of retirement age, it is safe to say that their needs for recreational activities are increasing. It is an important part of the rehabilitation process for a veteran, with a disability such as blindness, to be trained how to adapt and deal with all aspects of their lifestyles. Their participation in recreational activities may make up a large proportion of their activities at home. It is important to motivate veterans with disabilities to get out and do things and use the skills they were taught in the rehabilitation program to live life as independently as possible.

Recognizing the benefits veterans receive from professional interventions, other Blind Rehabilitation Centers are creating positions for recreation therapists.

## VOLUNTEERS AT THE WBRC

Volunteers play an important role in the functioning and programming of the WBRC and its recreational activities. Volunteers have been involved with WBRC programs from its earliest days. The Tuesday night dances and Thursday night social, for example, started in 1969 at the Menlo Park Division. Ernie Trejo and Leonora Banta were among the first volunteers to take an interest in working with the blind veterans, and through their interest and efforts they pulled in many other volunteers, such as Irene Voysey, Madeline Antonicic, and Helen Casson. A later addition to the Thursday night social was the addition of the "Golden Gals", who provided live music with Florence Babbitt playing the piano, Pat Liley as the vocalist, and California Kim and Juanita Doyle assisting. To this day they are still involved with the programs at the WBRC. Other volunteers, such as Marie Dunlapin, worked with the blind veterans on the golf course.

In 1983, with the coordination of Jerry Duncan, the volunteers began to provide more structured supplementary evening activities to round out the recreational program. They also assisted with, and provided, a wide variety of special events. Volunteers, such as Dessie Hoffman, were very instrumental in providing special events for the veteran population. In 1990, through the coordination of Liz Borra, there were many other volunteers who joined the program to provide transportation. This allowed greater flexibility for planning off station activities. In almost any recreation therapy outing there is a volunteer present to assist with the program. The regular volunteer drivers include; Roger Mendoza, Victor Jordan, Mary Hidalgo, and Charlotte and Ray Chastain.

Throughout the years there have been many volunteer organizations that have assisted the WBRC's programs, ranging from fund raising to barbecues and fishing trips. The organizations include many different posts of the American Legion, the Veterans of Foreign Wars, Elks Lodges, Moose Lodges, AMVETS, and the United Volunteer Services, along with many other groups who have had a positive involvement with the center, and all are indispensable to the recreation program at the WBRC.

# CHAPTER 14.
# The WBRC Clinical Psychology Program

Dorene E. Loew, Ph.D.
Clinical Psychologist
and
Edward J. Glass, Ph.D.
Clinical Psychologist

## Background

Clinical psychology has been a part of the Western Blind Rehabilitation Center training model since the Center's inception in 1967. In contrast, "in-house" formal psychology programming was absent during the initial phase of the Central Blind Rehabilitation Center (CBRC) at Hines, Illinois. Rather, Russ Williams, the Director of the CBRC, was the primary provider of personal and family counseling. Although neither a psychiatrist nor a psychologist by training, by all accounts Williams clearly "thought psychologically" about the blinded veterans he served and paired this with natural empathy and caring. For example, in her book The Unseen Minority: A Social History of Blindness in America, author Frances Koestler (p. 279) writes of Williams: "He spent time every day with every man, sensing when to soothe, when to encourage, when to challenge. He was kind and understanding but at the same time strict in his insistence that a man respect the discipline of the training program and that he work ceaselessly to rise to his own potential." The needs of those men for whom additional support was indicated were addressed by personnel outside the Blind Center. More specifically, both a psychiatrist and a vocational rehabilitation specialist consulted with the Center on an as needed basis, but neither were appointed to the Center full-time.

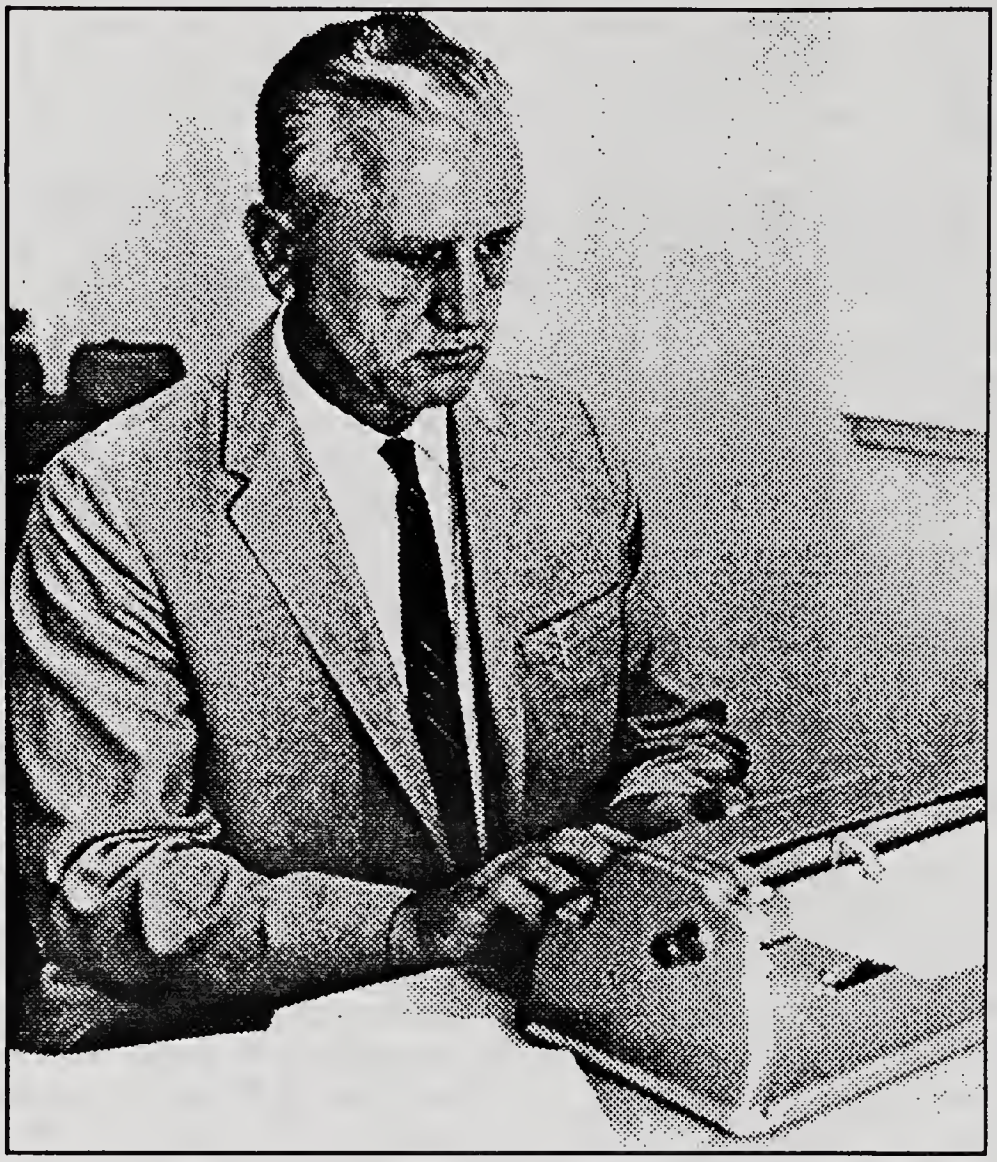
In 1951, when authorization was given for the capacity of the Hines program to be tripled from nine to 27 beds, Don Blasch was hired to be the counseling psychologist. Blasch, who holds a masters degree in counseling psychology, continued in the tradition of Williams, meeting individually with vets, offering support, encouragement, and confrontation as indicated. Blasch held the position of counseling psychologist until 1959 when Williams was transferred to Central Office. Blasch, further continuing in the tradition of Williams, assumed the role of Acting Chief and combined his counseling duties with managerial duties until 1960 when Loyal (Gene) Apple was appointed as the CBRC Chief.

Blasch left the CBRC in 1961 to become the Director of the newly established program in orientation and mobility at Western Michigan University. Prior to Blasch's departure, the VA mandated that all staff psychologists possess a doctoral degree. Accordingly, Norm Kerr, the person hired to replace Blasch, held a Ph.D. as did the psychologist who succeeded him, Beatrice Glick. Dr. Glick remains the clinical psychologist at the CBRC.

Apple left the CBRC in 1967 to accept the position of Chief at the Western Blind Rehabilitation Center (WBRC). At the time Apple assumed the position of Chief, psychology had evolved to a formal part of the blind rehabilitation center model. Put differently, at the inception of the WBRC, there was precedent for a full-time staff psychologist. Apple wasted little time in hiring one.

## Clinical Psychology at the WBRC: 1967 To Present

The first psychologist to be hired at the WBRC was Edward Glass. Dr. Glass, a veteran who was totally blinded in 1943 on military maneuvers at Camp Pendelton, recently had completed a two year post-doctoral public health fellowship of training in mental health sponsored jointly by the Psychology Department at Stanford University and the Psychology Service at the Palo Alto VA. Glass remained at the WBRC in the position of clinical psychologist until his retirement in 1985.



Dr. Edward Glass the WBRC's first clinical psychologist.

After Glass the next psychologist to be hired was Steve Shindell. Dr. Shindell completed his internship in Clinical Psychology at the Palo Alto VA and, prior to accepting the psychologist's position, spent a year at the WBRC as one of the principal investigators on the ACCESS Project, designed to lead to the development of an objective measure of adjustment to disability. Dr. Shindell left the WBRC in 1989 to become Director of the Psychological Service at the Shepard Spinal Center in Atlanta, Georgia. Following the departure of Shindell, Dorene Loew, the WBRC's current clinical psychologist, came on board. Like Dr. Shindell, Dr. Loew completed her internship in Clinical Psychology at the Palo Alto VA, but left to assume positions at the San Francisco VA and the University of California at San Francisco, before returning to the Palo Alto and the WBRC in 1989.

The differences between Drs. Glass, Shindell, and Loew are more difficult to note than their similarities. None ascribe to what is commonly regarded as the role of the psychologist, focusing solely on individual psychotherapy "behind closed doors". Rather, all three have taken

an interpersonal as well as an intrapersonal approach. This approach acknowledges that not only individual personality factors play a role in adjustment, but that systemic factors, such as the rehabilitation staff, the individual's family, and the values of society at large, can play an important role as well. Accordingly, the means of intervention used by the WBRC psychologists have included in-service training and staff consultation, psycho-educational groups, and stress management and relaxation training. These interventions do not assume that the individual is the problem, but focus on strategies for the individual to more effectively cope with problems that exist.

## Future Considerations

One of the pioneers in the effort to understand and address the emotional impact of sight loss was the Reverend Thomas Carroll, or "Father Carroll". Father Carroll provided instrumental consultation to the program at Hines, and later went on to write *Blindness: What It Is, What It Does, and How to Live With It.* Justifiably, *Blindness* is a work that continues to influence those entering the field today. However, since its first printing in 1961, a vast literature in clinical, social, and health psychology has burgeoned which either addresses directly, or bears direct implications for, an optimal understanding of the affective, cognitive, and behavioral sequelae of physical disability, including adventitious blindness. One foreseeable role for psychology within the VA blind rehabilitation system will be to help to disseminate this information and help to shape new programs appropriately. Additionally, as the population continues to age, Center psychologists will increasingly be called upon to disseminate information on psychosocial aspects of the aging process, and to continue to help shape appropriate program development.

## Appendix 1.

## Western Blind Rehabilitation Center University Affiliation Internships.

I. Chronology of the WBRC Orientation and Mobiliity Internship Program

1. Intern Supervisors.

| | |
|---|---|
| 1968 to 1971 | Nancy Darling |
| 1971 to 1976 | Ron Fenchack |
| 1976 to 1979 | Mark Voorhies |
| 1979 to 1982 | Jill Healey |
| 1982 to 1987 | Charles P. Vasile |
| 1987 to 1990 | Hector Copado |
| 1990 to present | Richard Ludt |

2. University Affiliations, Date of Affiliation, and Program Directors.

A. California State University at Los Angeles, March 1968.

| | |
|---|---|
| 1968 | Larry Blaha |
| 1968 to 1987 | Robert Eisenburg |
| 1987 to 1991 | Rona Pogrund, Ed.D. |
| 1991 to present | Diane Fazzi |

B. Western Michigan University, April 1970.

| | |
|---|---|
| 1980 | Donald Blasch |
| 1980 to 1981 | Dr. Ruth Kaarlela |
| 1981 to present | Dr. William Wiener |

C. San Francisco State University, September 1983.

| | |
|---|---|
| 1. 1983 to 1986 | Pete Wurtzburger |
| 2. 1986 to 1988 | Dr. Phil Hatlen |
| 3. 1988 to 1990 | Dr. Sandra Rosen and Dr. Phil Hatlen |
| 4. 1990 to present | Dr. Sandra Rosen |

D. Texas Tech University, September 1987.

| | |
|---|---|
| 1. 1987 to present | Dr. Virginia Sowell |

3. Number of Intern Graduates by University (as of 1-1-92 )

1. California State University at Los Angeles..... 194
2. Western Michigan University ..... 17
3. San Francisco State University ..... 11
4. Texas Tech University ..... 3

Total ..... 225

II. Chronology of the Living Skills Intern Program

1. Internship Supervisor

1985 to 1989..... June Jenkins
1991 to present ..... Holly Stonerock-Bliven

2. Affiliations

A. Western Michigan University, April 1974.
B. San Francisco State University, May 1983.

III. Manual Skills Internship Program

1. Internship Supervisor

1968 to 1970..... Pat McDonald

2. Affiliations

A. Pacific Union College, Anguin, California, 1968 to 1970

## Appendix 2.

## Western Blind Rehabilitation Center Leadership

I. Director

| | |
|---|---|
| 1967-1975 | L. Eugene Apple |
| 1975-1978 | Kenneth Wiley |
| 1979-present | Joseph J. Hennessey |

II. Assistant Director

| | |
|---|---|
| 1967-1975 | Jim Doyle |
| 1975-1979 | Joseph J. Hennessey |
| 1980-1986 | A. J. Yates |
| 1986-present | William Ekstrom |

III. Manual Skills, Chief

| | |
|---|---|
| 1967-present | Patrick F. McDonald |

IV. Orientation and Mobility, Chief

| | |
|---|---|
| 1967-1969 | Rex Ward |
| 1969-1970 | Howard "Jack" Wooling |
| 1970-1971 | Fletcher McDonald |
| 1971-1976 | Joseph J. Hennessey |
| 1976-1986 | William W. Ekstrom |
| 1987-present | Charles T. Vasile |

V. Orientation and Mobility, Assistant Chief

| | |
|---|---|
| 1969-1970 | Fletcher McDonald |
| 1968-1971 | Joseph J. Hennessey |
| 1972-1976 | William Ekstrom |
| 1976-1979 | Mark Voorhies |

VI. Living Skills, Chief

| | |
|---|---|
| 1967-1970 | Joy Bailey |
| 1970-1979 | Neal Schulman |
| 1979-1981 | Doug Blanton |
| 1982-1986 | Al Caso |
| 1986-1988 | Lynn Tomlinson [Stockebrand] |
| 1989-1991 | Sue Story |
| 1992-Present | Diane M. Ryan |

VII. Low Vision, Chief

| | |
|---|---|
| 1969-1972 | Carol Krauss |
| 1972-1974 | Richard Gray |
| 1974-1976 | Rex Ward |
| 1976-1990 | Robert D. Quillman |
| 1990-present | Hector Copado |

VIII. Computer Access Training, Chief

| | |
|---|---|
| 1991-present | Sue Story |

IX. Independent Living, Coordinator

| | |
|---|---|
| 1987-present | Phillip Lapekas |

X. Field Consultants

| | |
|---|---|
| 1967-68 | George Gillespie |
| 1980-81 | Mark Voorhies |
| 1982-85 | Jill Healey |
| 1986 | Louise Guerrero |
| 1987-88 | George Sands |
| 1989-present | Todd Turansky |

XI. Family Program

| | |
|---|---|
| 1968-1979 | Carroll Ault, Social Work Service |
| 1979-1985 | Arlene Dumas, Social Work Service |
| 1985-1987 | Dennis Radigan, Social Work Service |
| 1987-1990 | Andre M. De Cordova, Blind Rehabilitation |
| 1990-present | Sheri Johnson, Blind Rehabilitation |

X. Clinical Psychologists

| | |
|---|---|
| 1967-1988 | Edward Glass |
| 1988-1990 | Steve Shindell |
| 1989-present | Dorene Loew |

XV. Recreation Therapy

| | |
|---|---|
| 1983-1985 | Jerry Duncan |
| 1985-1986 | Shawn Hasson |
| 1986-1987 | Susan Fenner |
| 1987-1990 | Kay Knott |
| 1990-present | Elizabeth Borra |

VII. Low Vision Optometrists

| | |
|---|---|
| 1970-1992 | Edwin B. Mehr O.D. |
| 1978-present | Curt Keswick, O.D. |
| 1992-present | Jennine Kirby, O.D. |

XII. Research Leadership

| | |
|---|---|
| 1969-1971 | Marianne May |
| 1969-1976 | William Ekstrom |
| 1971-1972 | David McGowan |
| 1972-1976 | Richard Bennett |
| 1973-1974 | Donald Fonteneau, Ph.D., Psychology Service |
| 1974-present | Gregory L. Goodrich, Ph.D., Psychology Service |
| 1976-1977 | Nancy Darling |
| 1978-1979 | Stanley Paul |
| 1979-1984 | Diane Morrissette |
| 1981-1985 | Sue Melrose |
| 1983-present | Jan McKinley |
| 1990-1990 | Robert D. Quillman |
| 1991-present | L. Eugene Apple, Ph.D. |

XIII. Allied Health, Nursing Care

| | |
|---|---|
| 1977-1981 | Nancy Peterson, RN |
| 1981-1986 | Dorthy Johnston RN |
| 1986-1989 | Karen Brown RN |
| 1989-present | Marilyn Kazemi RN |

XIV. Allied Health, Physician

| | |
|---|---|
| 1967-1977 | Clement Kansara, M.D. |
| 1977-1981 | Masako Baba, M.D. |
| 1981-present | Carlos Camargo, M.D. |

XV. Allied Health, Ophthalmology

| | |
|---|---|
| 1967-1972 | Robert Little, M.D. |
| 1972-1976 | Edgar Snow, M.D. |
| 1977-1978 | Ralph Rosenthal, M.D. |
| 1978-1991 | Michael Gaynon, M.D. |
| 1991 | Harold Banoff, M.D. |

XVI. Division of Vision and Aging Program Coordinator

| | |
|---|---|
| 1988 | Edward (Ned) Duncan, Ph.D. |
| 1988 -present | Steven Lovett, Ph.D. |

## Appendix 3.

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Goodrich, G.L. & Jose, R.T. (1990). *Low Vision - The Reference*. Tulsa, OK: Low Vision Center of Tulsa.

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## About the Authors.

**Loyal Eugene Apple, Ph.D.**, has been a member of the research group at the Western Blind Rehabilitation Center since 1991. He is assigned to perform research on the development and evaluation of blind rehabilitation programs. Gene was Chief of the Central Blind Rehabilitation Section at Hines, Illinois from 1960 to 1967, the WBRC from 1967 to 1975 and Executive Director of the American Foundation for the Blind, New York, from 1975 to 1980. He received his doctorate at the University of North Carolina, Chapel Hill in 1985. He is professor emeritus from San Diego State University, College of Business Administration, Department of Marketing. He has published in both new product marketing and low vision/blind rehabilitation.

**Holly Stonerock Bliven, M.A.,** received her undergraduate degree in 1982 from the University of Texas at El Paso in Elementary and Special Education. She organized the Universities certification program in the teaching area of Deficit Vision. Mrs. Bliven taught Special Education for three years before attending Stephen F. Austin University and receiving her certification in Orientation and Mobility. For the next three years she continued to teach Special Education, as well as serving as her district's VH consultant and Mobility Instructor. In 1989 Mrs. Bliven received her Master's Degree in Rehabilitation teaching from Western Michigan University. She began working at the WBRC in 1989 where she is presently employed. In 1990 Mrs. Bliven was awarded an Outstanding Rating Certificate. Mrs. Bliven presented at the 1990 AER International Conference and was recently published in the January issue of The Journal of Visual Impairment and Blindness, "The Need for Vision in Teaching Orientation and Mobility." Mrs. Bliven has been supervising the Intern program at WBRC since 1991.

**Elizabeth Borra, CTRS, B.S.**, was assigned to the WBRC as a Recreational Therapist by Recreation Therapy Service in September 1990. She graduated from San Jose State University in 1988. Her internship was conducted, in 1988, at the Western Blind Rehabilitation Center. Prior to her transfer to the WBRC she worked in the Special Care Center of the VAMC, Palo Alto. Liz is certified by NCTRC as a Certified Therapeutic Recreation Specialist. She takes an active role in national events, such as the VA's Winter Sports Clinic where she instructs blind skiers in cross country skiing. She also has made presentations on recreation for the blind at the 1992 AER Conference and the VA Winter Sports Clinic. She is strongly committed to educating people who are blind or visually impaired about the need for them to become active participants in recreational activities and maintain a high quality of life.

**Hector Copado, M.A.**, became a Orientation and Mobility Specialist at the WBRC in 1979, after earning his graduate degree from California State University at Los Angeles in Special Education/Orientation and Mobility. His undergraduate degree in psychology came from the University of Texas, El Paso in 1976. He served as a Low Vision Specialist and Supervisor of O&M interns before assuming his present duties as Chief Vision Skills Section in 1990. He has published articles on low vision topics. He is certified in Electronic Travel Aids through Western Michigan University and is known among Mobility Specialists for his development of wheelchair mobility techniques for the blind.

**William Ekstrom, M.A.**, received his Bachelors Degree from Bridgewater State College in 1967 followed by a Masters Degree from Boston College specializing in Orientation & Mobility in 1968. He joined the WBRC staff as a Mobility instructor in September of 1968 expecting to return to New England within a year or two. With the idyllic northern California climate, the

rewarding experiences of working at the WBRC, and marriage to Barbara, a native Californian, in 1971 California became a permanent home. His 23 years at the WBRC have seen him in many roles. In 1970 he assumed the Mobility Research position and introduced electronic travel aids into the WBRC curriculum. A series of promotions placed him in the role of Assistant Supervisor of O&M, Supervisor of O&M, and Assistant Director of the WBRC which he has held from December of 1986 to the present.

**Gregory L. Goodrich, Ph.D.**, received his Ph.D. in experimental psychology from Washington State University in 1974. In the same year he joined Psychology Service and was assigned full-time to the WBRC. He's been "stuck" in the same position as the WBRC Research Psychologist for the past 18 years, finding the job challenging and enjoyable. He likes his job title. Since few people know what a Research Psychologist does, it leaves him free to define it as suits the needs of the WBRC. His primary interest is studying the perceptual aspects of low vision, however the clinical program often presents interesting problems in other areas which stretch his interests. Active in AER, Greg has held a variety of national and local offices, has authored or co-authored over 100 publications, and is a Clinical Assistant Professor at the School of Optometry, University of California, Berkeley. In 1991, he was awarded the first Non-Clinical Diplomat by the Low Vision Section, American Academy of Optometry.

**Joseph J. Hennessey, M.A.**, received his Bachelor of Science in Education of the Visually Impaired from Kutztown University, Pennsylvania. He completed his internship at the Central Blind Rehabilitation Center, at the VA in Hines, Illinois and received a Master of Arts from Western Michigan University in Blind Rehabilitation/Orientation & Mobility. He taught in the public school system in Boonton, New Jersey until he came to the Palo Alto VA in 1970. He has served as an Orientation & Mobility Instructor, Orientation & Mobility Section Assistant Supervisor, Orientation & Mobility Section Supervisor, WBRC Assistant Director, and presently, Director of the WBRC. He has published in the areas of orientation & mobility and advanced technology for mobility and reading print.

**Sheri Johnson, M.A.**, has a Bachelor of Science in psychology from Grand Valley State College, in Allendale, Michigan. She received a M.A. in Blind Rehabilitation from Western Michigan University. She began work in itinerant rehabilitation at the Lions Blind Center of Diablo Valley, California. Later she became an instructor in Living Skills at the State Rehabilitation Center in Nevada. She came to the WBRC in 1987 and worked as a Ward Clerk until an appointment was available as a Living Skills Rehabilitation Teacher. Since 1990 she has been the Coordinator of Social Services.

**Marilyn Kazemi, B.S.N., C.N.M.**, transferred to the WBRC as Head Nurse, in 1988, from her position as Head Nurse for the Geriatric Research and Education Center (GRECC) where she was Head Nurse from 1983 to 1988. Prior to this she was nursing coordinator, Long Term Care at the VA in North Chicago, Illinois. Her nursing experience includes many years overseas with the U.S. Army and Air Force, and five years as a Pediatric Nurse Practitioner in Iran. She has also taught labor and delivery and Pediatrics during her tenure overseas. She received her RN degree from St. Raphael's Hospital in New Haven, Connecticut in 1953. In 1956 she received a BSN from Boston University. She attended graduate school at the University of Texas at Austin in 1957 and, in 1967, did graduate work in midwifery in London, England. She was awarded the title of Certified Nurse Manager in 1988.

**Phillip Lapekas, M.A.**, began his career in Blind Rehabilitation at the Central Blind Rehabilitation Section, Hines, Illinois in the Manual Skills area in October of 1966. He had just received a B.A. as an Industrial Education intern from Western Michigan University. In September of 1967 he was sent to Palo Alto VA Medical Center to begin the new WBRC at Menlo Park. In 1968, he began Orientation and Mobility graduate study at California State University at San Francisco. He continued to work at the Blind Center as a Health Technician

until graduation in 1970. Phil then began work in Oakland at the Lion's Blind Center as their first Mobility instructor. When, a year later, that center began a very aggressive training and placement project, Mr. Lapekas was recruited as a Job Analyst, and then as the Coordinator. The program was highly successful and placed 52 persons over three years in such corporations as Bank of America and BART. After the close of this program Phil went into private business until September of 1982 when he returned to the WBRC. He has worked in Manual Skills, Low Vision and Living Skills. In December of 1987 Phil was chosen as the first Coordinator of the new Independent Living Program, where he remains today.

**Dorene Loew, Ph.D.**, received her undergraduate training in psychology at the University of California at Berkeley in 1980. She first came to the Palo Alto VA in the 1986 academic year to complete her pre-doctoral internship training. She received her doctoral degree in clinical psychology from the University of Vermont in 1987. Before returning to the Palo Alto VA in 1989 as the clinical psychologist at the Western Blind Rehabilitation Center, Dr. Loew was a staff psychologist at the San Francisco VA Medical Center and held a faculty appointment at the University of California, San Francisco. Her current faculty appointment is an Associate Clinical Professor at the School of Optometry at the University of California, Berkeley.

**Steven Lovett, Ph.D.,** is a Clinical Psychologist who specializes in geriatric rehabilitation. He has been the Coordinator of the Division of Vision and Aging at the VA Medical Center in Palo Alto, California since 1988 and is a Lecturer in the Department of Medicine at Stanford University Medical School. His scientific publications cover issues in low vision rehabilitation, stress and coping among family care-givers of frail elders, and the treatment of depression in later life. He earned his Ph.D. in Clinical Psychology at Virginia Polytechnic Institute and State University and completed a Post-doctoral Fellowship in Geriatric Mental Health at the Palo Alto VA Medical Center.

**Patrick F. McDonald, M.A.**, has been Chief of the Manual Skills Section since the WBRC opened in 1967. He is a 1962 graduate of Illinois State University in Chicago. After graduation, Patrick joined the staff of the Manual Arts Section at the VA hospital, Hines, Illinois. He was recruited by the Manual Skills Section, Central Blind Rehabilitation Section in 1963 and was transferred to the WBRC in 1967. He helped set up the center while designing his own program and recruiting staff. While working full-time as Chief of his section, he earned a M.A. from San Francisco State University in special education in 1970. He followed this with a M.A. from San Jose State University in 1974 in education administration.

**Janice L. McKinley, M.A.**, has worked as a Blind Rehabilitation Specialist/Research at the WBRC since November of 1984. She first came to WBRC in 1983 when she was employed as an instructor/evaluator by Sensory Access Foundation in the C-TEC (Computer Training and Evaluation Center) project located at WBRC. Prior to her current position, she had eight years experience in the field of rehabilitation as an instructor, rehabilitation counselor and vocational evaluator working primarily with sensory-impaired individuals including blind, deaf, and deaf/blind persons. She is particularly interested in technology and has enjoyed focusing on technology-based projects at WBRC. She has published articles on computer related technology and electronic travel aids for the visually impaired. She received an M.A. in rehabilitation counseling from the California Institute of Integral Studies, San Francisco, in 1976. Her B.S. degree was obtained from Kansas State University in biophysics in 1967. She did graduate work in molecular biology from 1967 to 1969.

**Diane Ryan, M.S.W.**, is a graduate of University of Southern California with a masters degree in Social Work. Ms. Ryan also has AER certification in Rehabilitation Teaching. Before her employment at the WBRC, Ms. Ryan was a Rehabilitation Teacher for the California State Department of Rehabilitation, after which, she was Director of Adult Services at the Foundation for the Junior Blind in Los Angeles, California. Ms. Ryan's honors include Who's Who Among

College Graduates and Southern California's AER award for Blind Worker of the Year. Ms. Ryan is most respected for her lecturing and conference workshops on adjustment to blindness and the rehabilitation process. these include presentations at AER in 1988, 1990, and 1991, and keynote speaker at the 1990 national Retinitis Pigmentosa Conference.

**Sue M. Story, BSed**, transferred to the WBRC in 1989 as Living Skills Supervisor from Blind Rehabilitation Research at the Southeastern Blind Rehabilitation Center, Birmingham, Alabama. Her WBRC supervisory responsibilities in 1989 included Living Skills, Independent Living, and Computer Training. She had joined SBRC in 1981 as a Living Skills Specialist and moved to Research Specialist in 1984. She has graduate work in Special Education for the blind and profoundly retarded from Northern Illinois University, Dekalb. She obtained her undergraduate degree in Special Education from that university in 1978. She has published on computer access technology and mobility. In 1992 she became the Chief of the Computer Access Training Section, after having spent the last several years developing that program.

**Todd Turansky, M.A.**, is a graduate of Western Michigan University in Orientation and Mobility. Immediately after graduation, he joined the Mobility staff at Hines and later worked there as a low vision specialist. He left Hines to become a Visual Impairment Services (VIS) Coordinator in Oklahoma before being appointed as Blind Rehabilitation Services Consultant to VA Central Office and stationed at the Western Blind Rehabilitation Center. His position requires that he provide consultation to VIS programs in the 14 western states. He chairs AER's Division 18 (Veterans Services).

**Charles P. Vasile, M.A.**, has a Bachelor of Arts in psychology from California State University at San Jose. During this time, he worked as a Health Technician at the WBRC. He received a Master of Arts in Special Education (Orientation & Mobility) from California State University at Los Angeles. He returned to the WBRC in 1977, and has since served as an Orientation & Mobility Specialist, Orientation & Mobility Intern Supervisor, and at present, the Orientation Mobility Supervisor. His responsibilities include supervision, coordination, and counseling of 8 Orientation & Mobility Specialists, 1 Orientation & Mobility Intern Supervisor, as well as the implementation of developed treatment plans for 30 visually impaired veterans and the training curriculum for Orientation & Mobility Interns from 4 major universities. His postgraduate work includes an Electronic Travel Aids Credential from Western Michigan University and Sonic Pathfinder Instructor Certification from the Royal Guide Dogs Associations of Australia. He is particularly noted for his development of the Low Vision Orientation & Mobility Program.

## In Memory.

Since the opening of the WBRC in 1967, five staff have passed away. In commemorating the first 25 years of the Center, it is fitting that we pause and remember the contributions of these five, who were our colleagues and friends.

**Richard Bennett**, Reading Machines Specialist
**Dick Gray**, Manual Skills and Low Vision Specialist
**Tim Mayer**, Blind Rehabilitation Specialist (Research)
**Fletcher McDonald**, Orientation and Mobility Instructor
**Phil Syverson**, Orientation and Mobility Instructor

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